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THE MATERIA MEDICA.

32.—CINA, SEMEN SANTONICI.

Nat. Ord.: Compositeæ (Asteraceæ of Lindley).

The species from which Cina or the worm-seed is derived can scarcely be said to be exactly known. Lindley says,—"The flower-heads of many species of Artemisia constitute the drugs called Semen Contra, or Semen Cina, vermifuges of much activity. Those, which form the principal part of this substance, are A. Sieberi, Lercheana, Contra, and pauciflora." The substance sold in the shops as worm-seed contains, besides the half-developed blossoms, which are no doubt the active ingredients, "scales belonging to the calyx, small rolled-up leaves, heterogeneous vegetable remains, and, lastly, various foreign bodies, such as sand, small shells, &c." The worm-seed does not contain any seed properly so called. The sort brought from the Levant is preferred.

Chem. Comp.: Pereira gives the following analysis by Wakenroder of the Levant variety.

Volatile oil	0.0039
Bitter matter	20.25
Resinous bitter substance	4.45
Green Resin	6.05
Cerin	0.35

Gummy Extractive ...	15.50
Ulmin	8.60
Malate of lime and silica	2.00
Woody fibre	35.45
Intermixed Earthy matter	6.70

This is an old analysis, and from it we do not learn what is the active principle of the drug. Recently a crystalline neutral principle has been obtained from the worm-seed, which is undoubtedly the active principle of Cina. The *characters and test* of the crystalline substance, which has been called *Santonine*, are, according to the *British Pharmacopœia*, the following:—"Colorless, flat, rhombic prisms, feebly bitter, fusible and sublimable by a moderate heat, scarcely soluble in cold water, sparingly in boiling water, but abundantly in chloroform and in boiling rectified spirit. Sunlight renders it yellow: not dissolved by dilute mineral acids; entirely destructible by a red heat with free access of air." Its composition is $C_{30} H_{18} O_6$.

Old School Uses: No more than what Hahnemann has mentioned, only that Santonine has now taken the place of the crude drug. We have observed that it is only the first few doses, when at all massive, either of the crude drug or its active principle, that succeed in expelling worms. Repetition of the same very seldom are so effectual, on the contrary, the system seems to get hardened against its anthelmintic properties, while at the same time it becomes subject to numerous other disturbances, of which a picture is afforded in the following pathogenesis. Hence it should not be used but with extreme caution, especially in the case of children.

Concordances.

Moral and intellectual faculties.—Cham. ignat. lyc. PLAT. *puls. sulph-ac.*

Seat of the diseases.—*Acon.* anac. arg. *ars.* aur. *bell. bry.* CALC. CHIN. cocc. con. *cupr. ferr.* hyosc. IGNAT. kali. LYC. merc. natr-mur. N-VOM. oleand. PHOSPH. *ph-ac. plat.* PULS. rhus. SABAD. sec-corn. SEP. SIL. SPIG. stann. staph. *sulph.* sulph-ac. *veratr.* verb. zinc.

Morbid states and sensations.—Alum. anac. *ang. arn. asaf.* BELL. CALC. caust. cham. chin. cocc. *dulc.* ignat. KALI. lyc. merc. natr. natr-mur. nitr-ac. *n-vom.* PLAT. puls. *sabin. sep.* spig. sulph-ac.

Glands.—Merc.

Skin.—Acon. *ars.* asaf. *bell. bry.* hep. lach. *lyc.* MERC. PULS. rhus. *sil.* sulph.

Sleep and dreams.—Ars. caust. *creos.* IGNAT. N-VOM. RHUS. sassap.

Pyrosis.—Acon. bry. *cham.* chin. *hep.* ipec. natr-mur. veratr.

Time.—Ant-crud. arn. ARS. bar. calc. canth. caps. CHIN. ignat. lyc. *natr-mur.* plumb. puls. rhus. sabad. staph. sulph.

Exacerbations.—Acon. asaf. *bell.* bry. CALC. *caps. carb-veg.* chin. ferr. graph. *hep.* ignat. kali. lach. LYC. NATR-MUR. N-VOM. oleand. *phosph.* plat. puls. *rhodod. rhus. ruta.* sabad. SEP. SIL. *spig.* SULPH.

Concordances in general.—Acon. arn. *ars.* asaf. *bell.* bry. CALC. *caps.* cham. CHIN. ferr. hep. IGNAT. kali. LYC. merc. *natr-mur.* N-VOM. phosph. PLAT. PULS. *rhus.* sabad. *sep.* SIL. spig. *sulph.* sulph-ac. veratr.

Antidotes.—Camph. caps. *chin.* (ipec.) piper. niger.

Hahnemann's Preface.

(This semen, even the best, looks like small, oblong, light, yellow-green blossoms, mixed with a few stems, and coming from the bush known under the name of *Artemisia Contra.*

The tincture is prepared by mixing twenty parts of alcohol with one part of the entire blossoms, and extracting their virtue during a whole week, without applying any heat.)

For centuries past this important drug has been used only to expel worms, being given in doses of 10, 20, 30, 60 and more grains. I shall say nothing of the dangerous and even fatal consequences attending the administration of such doses, and I would merely make the passing remark, that a few worms, in lively children, cannot be considered an important disease; they are quite common in childhood, and cause but little inconvenience in an age where the psoric miasm is yet in a latent condition, on the contrary, however, where worms are found in a large quantity, they originate in a morbid condition of the system, in the psoric miasm which has been roused from its latent state, and which must be cured; otherwise the worms are speedily re-produced. By such improper re-iterated expulsions of the worms nothing is gained, and, in very many instances, they end in the death of the sufferer.

The following list of symptoms shows that this agent has many more powers than that of expelling worms.

It possesses great curative powers in whooping-cough, and in certain intermittent fevers accompanied with vomiting and canine hunger.

Formerly I was in the habit of using the 9th potency, but I know now, that the 30th potency exhibits the curative powers of Cina in a more appropriate degree. One, two or three pellets may be given at a dose.

ANTIDOTES: Bry. Chin. Hyosc. Ipec.

Pathogenetic Symptoms.

Mind:—

. When walking in the open air, great anguish about the heart, as if he had committed some evil deed (after 37 h.).

. The child is extremely disposed to weep and complain.

. He cries piteously when one attempts to touch him or take him by the hand (after 3 h.).

. Very serious and susceptible; he was disposed to take offence at the least jest.

5. Indifferent; both agreeable and disagreeable things left him perfectly indifferent.

. Uneasiness.

. Desires a great number of various things.

. Scorns every thing which is offered to him, even those things which were most agreeable to him.

. Cannot be calmed by persuations, is indifferent to all caresses.

Sensorium :—

10. Delirium, (during fever-heat).
. Obscuration of sight when rising from bed in the morning; dizziness, faintishness, staggering, relieved when lying down.

Head :—

. Violent headache.
. Dull headache, the eyes being affected, in the morning.
. Headache with a general feeling of uncommon forgetfulness.
15. Intermitting pressure on the top of the head, as if from a heavy load, as if the brain were being pressed down; the pain is increased or brought on again by pressing upon the parts.
. Pain in the outer parts of the forehead, pressing from above downwards, as if something were gradually pressing downwards. (after ¾ h.).
. Headache the whole day, a sort of pressure with tearing; extending into the zygoma.
. Aching pain in the head, the whole day, in the evening the pain is also felt in the forehead.
. When walking in the open air, stupefying, internal headache, especially in the forepart of the head, afterwards in the occiput (after 3 h.).
20. When waking, pain in the right parietal bone and the right side of the forehead, pressing, from within outwards.
. When sitting, stupefying, aching pain in the forehead and temples, externally, finally affecting the whole head (after 36 h.).
. Pressure on the frontal bone, with undulating sensation internally.
. Headache, as if the whole head were screwed in, with obtusion of the head.
. Pain in the upper part of the frontal bone, as if it were being violently pressed together.
25. Immediately after a meal and afterwards, a dull, drawing pain in the interior of the head, increased by reading and mental labor.
. The headache increases by reading and by reflection, and is diminished by stooping.
. Cramp-like drawing in the temples, increased by pressing upon the parts.
. Stretching and tearing pain in the right temple.
. Drawing pressure on the left side of the sinciput.
30. Aching pain in the left temporal region, resembling a fine tearing, going off by moving the head (after 11 h.).
. Drawing, causing gloominess, from the left frontal eminence to the root of the nose.
. Paralytic tearing in the left frontal eminence, with stupefaction of the head; immediately after, the same pain is felt in the right frontal eminence.
. Drawing tearing pain in the whole left side of the head.
. A small spot of the right parietal bone feels numb and as if

gone to sleep.

35. Dull stitches in the brain, especially the left half of the vertex (after 1½ h.).

. Violent dull stitches above the right temple, in the frontal bone, extending deep into the head and nearly causing stupefaction.

. As the headache disappears, an oppressive pain in the abdomen sets in; the headache returning after the disappearance of the latter pain.

. The child's head inclines to one side.

Eyes :—

. Slow, dull stitch above the upper margin of the orbit, extending deep into the brain.

40. Jactitation of the orbicularis palpebrarum muscle; a sort of convulsive twitching.

. Dull pain in the eyes, while reading or performing some other mental labor.

. Pushing pressure in the interior of the eyes, generally accompanied with dilatation of the pupils.

. Dilatation of the pupils (after ½ h.).

. Contraction of the pupils (after 3½ h.).

45. Great contraction of the pupils (after 1 h.).

. In the evening, when attempting to look at a thing steadily, he sees it through a gauze; when wiping the eyes, his sight is clearer for a short time.

. When reading a book his eyes were dim; he was not able to continue his reading till he had rubbed the eyes with the fingers.

. Faint eyes (in the morning); the upper eyelids were so weak that he was scarcely able to open them, continuing the whole afternoon.

. Burning pain in the outer canthus, mixed with itching, also in the margin of the upper eyelid (after 2 h.).

50. Burning in the eyelids, especially in the inner canthus, in the evening, at candle-light.

. Dryness of the eyelids, in the evening at candle-light, and a feeling of pressure in the eyes, as if sand had got in.

. Feeling of dryness in the inner eye, and an aching, with drawing in the eyes, when exerting them ever so little in reading.

. Tingling in the eyelids, he has to rub them.

. Titillating itching in the internal canthus of the right eye, obliging one to rub (after 1 h.).

55. Titillating itching of the left external canthus, obliging one to rub (after 36 h.).

. Agglutination of the inner canthi, in the morning, after rising.

. Dull pressure upon the lower margin of the orbit; the pressure increases, and may be excited again, by pressing upon the part.

. (Specks on the Cornea.)

. (Chronic weakness of sight (from onanism), with photophobia and pressure in the eyes, as from sand.)

Ears :—

60. Cramp-like jerking in the external ear, like otalgia.

. Dull stitches under the mastoid process, a sort of clawing pressure; when pressing upon the parts, the pain is as that of a bruise or contusion.

Nose :—

. The child bores in the nose, until blood comes out.

. Deep in the left nostril a burning sensation, not disagreeable, as if blood would come, or as if brandy had been drawn up into the nose.

. Burning soreness of the septum in the left nostril, as if a scurf had been scratched off; worse when touching the parts from without.

Face :—

65. He looks sick around the eyes and pale in the face.

. Pain as if the two zygomata were seized by pincers and compressed; the pain increases by external pressure.

. Cramp-like jerking in the zygoma; the pain, even after having disappeared, may be excited again by strongly pressing upon the parts; in this case, however, it is felt like a continuous, cramp-like or paralytic pain.

. Pain in the zygomata, extending and tearing, coming on at intervals, erratic, increased by pressing upon the part.

. White and bluish color around the mouth.

70. Bloated, bluish countenance.

Mouth, Jaws and Teeth :—

. Ulcer upon the cheek, with hardness all round.

. Aching pain in the submaxillary glands.

. Dull, stitching pain in the right ramus of the lower jaw, increased by pressure.

. Single fine prickings in the left lower jaw, increased by pressing upon the part.

75. Jerking pain in the left lower jaw.

. Toothache, as if the teeth were sore.

. The inspired air and cold drink affect the tooth painfully.

. Paralytic feeling in the nape of the neck.

. Dryness and roughness of the mouth, especially of the palate, with nauseous qualmishness (after 3½ h.).

Pharynx, Œsophagus, Taste and Appetite :—

80. Inability to swallow; the drink is pushed to and fro in the mouth for a long time.

. Violent hunger shortly after a meal.

. (Voraciousness.)

. (Canine hunger.)

. (Bitter taste of the bread.)

85. (Aversion of the infant to his mother's milk which is healthy).

. Thirst.

Gastric Symptoms:—

. Empty eructations, early in the morning.

. Eructations, tasting of the ingesta, after a meal.

. Gulping up of a bitter-sour fluid, shortly after a meal.

90. Qualmishness in the pit of the stomach, with thrills of shuddering, (immediately).

. Several lumbrici creep along the œsophagus, and make their appearance at the mouth of the child.

. Inclination to vomit, with emptiness of the head.

. Frequent hiccough (after $1\frac{1}{4}$ h.).

. Constant pressure in the stomach, in the night.

95. (Vomiting with clean tongue.)

. (Bilious vomiting.)

. (Vomiting and diarrhœa after drinking.)

Abdomen:—

. Clawing, or cramp-like pressure after a meal, transversely across the epigastrium, in the præcordial region.

. Pain in the præcordial region, oppressing the breathing (after 4 h.).

100. Digging-up pain in the epigastric (præcordial) region, with sensation as of numberless confused motions, and as if the parts were bruised.

. Dull stitches on the left side and below the pit of the stomach, increased by pressing upon the part, and diminished by deep inspirations.

. Boring pain over the umbilicus, going off when pressing upon the parts.

. Continual pinching in the abdomen.

. Intermittent prickings in the left side of the abdomen, a sort of pinching, when sitting (after 10 h.).

105. Sudden, deep, sharp, intermittent stitches internally, and on the left side of the umbilicus, especially during an inspiration accompanied by simultaneously occurring stitches on the inner side of the scapulæ, towards evening (after 12 h.).

. Cutting pinching in the abdomen, which did not abate until he had been to stool (after 48 h.).

. Violent pain in the umbilicus and the umbilical region, as if the umbilicus were pressed forcibly into the abdomen, or as if one had knocked it against something, first for a short, afterwards for a longer time, when it became more violent during an inspiration.

. Painful twisting around the umbilicus; pain is likewise felt when pressing upon the umbilicus.

. After a meal, a painful pressure upon the umbilicus, also when pressing upon it.

110. Cutting pain in the small intestines, in the morning.

. Disagreeable feeling of warmth in the abdomen, which terminated in pinching (after 4 h.).

. Pulsation in the hypogastrium, close above the mons veneris.

. Low and short reports and movement of flatulence.

. Violent, single stitches in the lower part of the rectum, during emission of flatulence.

115. Feeling of emptiness in the abdomen, with silent emission of flatulence (after 1 h.).

Stool and Anus :—

. (Papescent stool.)

. (Fæcal and bilious diarrhœa.)

. (White, involuntary diarrhœaic stools.)

. Voluptuous itching of the front part of the anus (after 4 h.).

Urinary Organs :—

120. Frequent desire to urinate, with copious emission, the whole day (after 3 h.).

. Turbid urine (immediately).

. Urine becoming turbid immediately.

Genital Organs :—

. Labor-like, frequently recurring pains in the abdomen, as if the menses would appear (after 2 h.).

. Hæmorrhage from the uterus during the whole of the time that she used the semen Santonici, (in a girl of ten years.)

Cold, Coryza :—

125. Violent sneezing (after 8 h.).

. Violent sneezing, which produced a shock in the head pressing through the temples. the headache which pressed through the temples, remained for some time after the sneezing.

. Violent sneezing, which affected the chest as if it would burst on both sides; even afterwards he feels a pain from it, especially in the right side.

. Fluent coryza (after $\frac{3}{4}$ h.).

. A sort of coryza; in the morning he is frequently obliged to blow his nose, the nose is always full of loose mucus (after some days).

130. Discharge of a purulent matter from the nose.

. Obstruction of the nose, in the evening, after having been affected with fluent coryza in the forenoon.

Respiratory Organs and Chest :—

. Mucus in the throat, which he throws up by voluntary hawking (after 6 h.).

. When walking in the open air, short, rattling breathing, as if he had much mucus in the chest, without being obliged to hawk it up (after 6 h.).

. Heavy, loud breathing (after $\frac{1}{2}$ h.).

135. Short, rattling breathing.

. Short breathing, sometimes interrupted, a few inspirations being wanting.

. The child's breathing is very short, with loud rattling in the chest.

. During inspiration, loud wheezing in the trachea, not audible during an inspiration.

. Mucus in the larynx, after rising; he is frequently obliged to hawk it up, after which it speedily returns.

140. Continual hawking up of mucus in the morning, which is constantly reproduced and adheres to the larynx.

. Great dryness in the back part of the throat (trachea): sort of catarrhal feeling.

. Deep breathing excites a disposition to cough.

. Titillation low down in the trachea, inducing cough; if he then coughs, he throws up whitish mucus (after 24 h.).

. Titillation in the trachea below the handle of the sternum, inducing cough and expectoration of a whitish mucus (after 16 h.).

145. Previous to coughing the child raises herself suddenly, and stares all around; the whole body looks rigid; she is without consciousness, as if she were to have an epileptic fit; these appearances are followed by cough.

. The child moans after coughing; a sort of gurgling noise from above downwards is heard; she is anxious, gasps for air, and turns quite pale in the face; in paroxysms of two minutes.

. Violent coughing fits from time to time.

. Hoarse cough with vomiturition, only a few fits at a time, the succeeding fit being excited after a longer pause; in the evening.

. Hoarse cough, with vomiturition, in the morning, after rising; after a pause it is excited again by an inspiration, as if particles of dust had got into the throat.

150. Hollow cough, in the morning after rising; violent shocks against the upper part of the trachea, mucus being detached but with difficulty (in a few days).

. In the morning he is obliged to cough so violently, in order to get the mucus loose, that his eyes become moist.

. During the morning-cough the upper part of the chest, under the sternum, feels sore; if he then succeeds in coughing up something loose, this place continues to be painfully sore and burning, as if something had been torn off.

. (Dry spasmodic cough, with want of breath, and jactitation of the limbs.)

. (Whooping cough, preceded by rigidity of the body and great paleness of face, particularly when the children are scrofulous, affected with worms, or nocturnal enuresis.)

155. Clawing (crampy) sensation in the chest, during an inspiration.

. Asthma while standing (continuing half an hour) with anxiety; he sweated very much on the chest.

. A kind of oppression of the chest; sensation as if the sternum were too close to the chest, the breathing is somewhat oppressed.

. Cramp-like drawing together in the left half of the chest.

. Soreness under the sternum, *per se*.

160. Clawing pain on the sternum, when running.

. Sudden oppressive pain in the left side of the chest.

. Cramp-like, digging-up pain under the sternum, as if the chest were to be burst asunder.

. Fine clawing on the clavicle, as if pressure were made upon the part by a dull point.

. Pain specially during an expiration, pressing from within outwards, at times in the left side of the chest, at times in the small of the back; the pain in the back is like a pain from long stooping (after 4 h.).

165. Painful digging-up under the upper part of the sternum.

. Pinching pains in the left side of the chest, increased by every inspiration (after 30 h.).

. Pinching pain in the left side of the chest between the second and third rib.

. Pinching-stitching pain in the left side of the chest (continuing ¼ h.).

. Single stitches in the chest from time to time.

170. Prickling, burning, fine stitches in the side, in the region of one of the true ribs, intermittent.

. Dull stitches by the side of the sternum, on the cartilage of a rib, increased by pressing upon them and by expiration, diminished by inspiration.

. Two dull, piercing stitches in quick succession, near the sternum beneath the left clavicle, during a deep inspiration; he does not feel any thing during an expiration; he feels much pain when pressing upon the part.

. Darting pains in the right chest between the sixth and eighth rib, not influenced by pressing upon the parts, or by inspirations or expirations.

. Sudden darting in the left side of the chest, between the fifth and sixth rib.

175. Boring, stitching pain in the middle of the right side below the ribs, disappearing when pressing upon the parts.

Back:—

. Pain, as from bruises, in the small of the back, not increased by motion (after 35 h.).

. Tearing in the left hip and glutei muscles.

. Paralytic drawing in the loins.

. Sensation after a meal, as if the lumbar region above the hips were being constricted by means of a tight bandage.

180. Painful weariness in the loins, as if he had been standing a long while.

. Pain in the loins and the dorsal spine, when inclining sideways or backwards, as if he had fatigued himself a good deal.

. Tearing-jerking pains in the middle of the spinal column, going off by moving the body, returning when at rest.

. In the evening, when lying on one side, the dorsal spine aches as if broken.

. When lying on the back, in the bed, the dorsal spine is painful, as if broken.

185. Drawing-tearing pain along the whole of the dorsal spine (after 29 h.).

. Boring stitches in the right cervical muscles, synchronous with the pulse, disappearing when moving the neck (after 11 h.).

. Lancinating pain in the upper part of the spinal column, towards the right scapula,

. Stitching pain in the outer border of the right scapula.

. Aching in the scapulæ, when moving them.

Upper Extremities :—

190. Clawing on the top of the shoulder.

. Pricking on the top of the shoulder.

. Stitching pain on the top of the left shoulder, not going off by pressing upon the parts or by moving the arm (after 32 h.).

. Single stitches in the front part of the left shoulder.

. Paralytic drawing through the right arm, from above downwards, especially when letting it hang down or when leaning it upon something; in this latter case especially in that part which is pressing hard upon the subjacent body.

195. Paralytic pain in the arm, he is obliged to let it hang down.

. Paralytic feeling in the whole of the right arm, the joint felt rigid, so that it could not be moved (after 29 h.).

. Stretching-tearing pain in the arms, with paralytic feeling; when touching it, it felt bruised, as after a violent muscular effort.

. Paralytic drawing through the upper arm, from the commencement to the middle, he scarcely dares move it; when pressing upon the affected part, it feels bruised and contused.

. Boring, cramp like pain in the left upper arm, not going off by motion (after 25 h.).

200. Drawing-tearing pain in the right upper arm, going off by pressing upon it, but returning immediately (after 27 h.).

. Violent, clawing pain in the right upper arm, disappearing by motion, but returning when at rest.

. Pain as from a bruise or contusion, in the upper arm, over the elbow-joint.

. Paralytic pain in the bend of the elbow, towards the outer side a sort of jerking, intermittent.

. Tearing pain in the right elbow-joint, when at rest, uninfluenced by motion (after 27 h.).

205. Digging up pain in the left fore-arm, moving from the wrist-joint to the elbow-joint (after 1¾ h.).

. A drawing-tearing pain in the whole right fore-arm, not going off by motion (after 7 h.).

. Cramp-like painful pressure in the muscles of the fore-arm, especially when bending it.

. Paralytic jerking from above downwards, in the lower surface of the fore arm, but especially violent at the place where it began.

. Early in the morning, when stretching the arms violently, cramp-like pain in the fore-arms, especially from the elbow-joint; when bending the hands backwards and forwards while the arms are stretched, he feels a similar pain in the wrist-joints.

210. Contractive tearing, like cramp, in the lower muscles of the left fore-arm, close to the wrist, going off speedily during

motion (after 17 h.).
. Drawing pains in the joints of the hands (after 12, 24 h.).
. The wrist-joint feels sprained.
. Pinching-boring pain in the right wrist (after 3 h.).
. Intermittent, cramp-like contraction of the hand.
215. Jerking-tearing pain in the palm of the left hand, increasing by stretching the hand.
. Single stitches in the left hand towards the little finger.
. Single, small, jerking stitches at times in the right, at times in the left hand (after 33 h.).
. Itching of the dorsum of the left hand, obliging him to scratch, and going off by scratching (after 6½ h.).
. Itching titillation of the border of the right hand, externally, near the thumb and index-finger (after 35 h.).
220. Fine stitches in the proximal extremity of the metacarpal bone of the ring fingers; when pressing upon it, it feels painful, as if bruised.
. Spasmodic contraction of the right middle-finger, with cramp-like pain; the finger was bent inwards.
. Sudden jerking inwards of the fingers of the right hand.
. Cramp-like jerking in the fingers.
. Drawing in the fingers (after 18 h.).
225. Cramp-like pain in the muscles of the outer side of the left little finger, going off during motion (after 12 h.).
. Burning pain of the proximal joint of the middle finger.
. Paralytic drawing in the ring-finger both when at rest and in motion.
. Tingling in the distal joint of the thumb, as if it had gone to sleep.
. Tingling in the tip of the thumb as if it had gone to sleep; it feels numb.
230. Pain in the ball of the thumb, as if it had been knocked upon hard, the pain being felt when pressing upon the part, and also when moving the metacarpal joint of the thumb towards the palm of the hand.

Lower Extremities: –

. Pain beneath the glutei muscles, boring, from within outwards, while sitting, going off by motion and by pressing upon the part, but speedily recurring when at rest.
. When sitting, the nates feel painful, as if fatigued by long sitting.
. Pain in the great trochanter, when walking, as if he had fallen upon it.
. Thrills of shuddering over the thighs.
235. When standing, cramp-like pain in the anterior muscles of the left thigh (after ¼ h.).
. Drawing-tearing pain on the anterior surface of the right thigh, going off by violent motion.
. Paralytic pain in the left thigh, not far from the knee.
. The child stretches out his feet spasmodically.

. The left foot of the child is in constant spasmodic motion; at last it remains immovable and turned away from the body.

240. Single, dull stitches in the knees, now and then.

. Single prickings in the region of the patella.

. A sudden suffusion of heat over the knee, not disagreeable, as if a hot body, for instance, a glowing coal, were brought into the neighborhood of the knee.

. Paralytic jerking in the front part of the leg, between the tibia and fibula.

. Cramp-like pain when walking in the open air, now in the muscles of the right, now in those of the left leg, soon disappearing when standing or sitting (after 30 h.).

245. Digging-up pain beneath the left knee, upon the tibia (after 8½ h.).

. Intermittent stitches, as with a fork, in the left tibia, close below the knee.

. Tearing pains in the middle of the left calf (when sitting).

. Jerking-tearing in the interior of the foot.

. Stitches in the ball of the right foot.

250. Cutting pain in all the toes of the right foot, as if they were being amputated, not disappearing by motion (after 2 h.).

. Lancinating pain in the left heel (when sitting).

Skin:—

. Painful stitches, here and there in the outter parts of the trunk, but especially in the outer parts of the abdomen; when sitting (after 8 h.).

. Dull stitches in the outer parts of the body, here and there. (after several days.)

. Dull stitches, sometimes as if clawing, sometimes pressing, sometimes conveying the sensation of a shock or jerk, sometimes feeling like an itching, in different parts of the body, now in the limbs, arms, feet, toes, now in the side, or in the back, now in the nasal bone, but especially in the posterior portion of the crest of the ilium, and always in the outer parts of those organs; when pressing upon the part, it feels bruised or sore.

255. Burning, fine stitches in different parts, going off by scratching.

. Prickling, itching-tingling, sensation in different parts of the body, soon disappearing after scratching.

. Violent itching in the night, in different places of the skin.

. In the evening, eruption of red, itching pimples, disappearing speedily.

. Translucent rash.

Sleep:—

260. Frequent yawning, as if he had not slept enough (after 5 h.).

. Great drowsiness when sitting; he was obliged to lie down (after 6½ h.).

. In the afternoon he is attacked by unusual drowsiness.

. Drowsy the whole day.

. Invincible drowsiness in the evening (for several days).
265. Nightly restlessness, frequent change of position in order to be more comfortable.
. The child tosses from side to side, even while awake.
. Sleepless.
. Tossing about when asleep, lamenting and complaining of colic (after 8—12 h.).
. Wakes up moaning, lamenting, sobbing, with restlessness (after 2 h.).
270. A number of absurd dreams.
. Sleeping while sitting erect, the head being inclined backwards or to the right side (after 2 h.).
. Frequent waking from disagreeable or busy dreams.
. Dreams full of anxiety.
. Sleep, with dreams full of trouble.
275. Suffusion of heat, after sleep, and glowing redness of the cheeks, without thirst.

Fever :—

. Tremor of the body while yawning, with sensation of shuddering.
. Shuddering over the upper part of the body towards the head as if the hair would stand on end, even near the warm stove (immediately).
. Feverish shivering over the whole body (after ½ h.).
. Thrill of shuddering over the trunk, he trembles even near the warm stove.
280. Cold face with warm hands.
. Pale, cold countenance; cold cheeks.
. Cold sweat on the forehead.
. Cold sweat on the forehead and hands.
. Cold sweat on the forehead, nose and hands (after 12, 20 h.).
285. Fever: vomiting of the ingesta, afterwards chilliness over the whole body, followed by heat, with great thirst (in a few h.).
. Quotidian fever, at the same hour; chilliness, followed by heat, without thirst (after 24 h.).
. Quotidian fever at the same hour, with very short breathing (after 48 h.).
. Fever, several attacks of chilliness, with thirst, with coldness of the hands and feet, every afternoon (from 1 o'clock); afterwards heat, with pallor of the countenance, but especially hot hands and feet, with cutting colic.
. Early in the morning, cold hands and thrills of chilliness, without thirst, even near the warm stove.
290. Violent fever and heat.
. Feverish shuddering over the whole body, with hot cheeks, without thirst (after 25 h.).
. Violent fever, with vomiting and diarrhœa.
. Heat in the evening and during the night.
. Heat in fever, mostly about the head, with yellow complexion

and blue margins around the eyes.

295. Heat with redness of the face, accompanied with sweat from the commencement, without thirst, (after 8 h.).

. Feeling of heat, and heat, with redness in the face (after 2 h.).

. Burning heat over the whole face, with redness of the cheeks and thirst after cold drink (after 35 h.).

. Trembling motion of the heart.

General Symptoms ; Fits :—

. When sitting, he experiences cramp-like, contractive stitches alternately in the muscles of the right and left thigh, now in the muscles of the left, now in those of the right upper arm, and sometimes along the small of the back from below upwards, resembling pain in the back, disappearing when walking in the open air (after 27 h.).

300. Cramp-like tearing when sitting, at times in the muscles of the left, at times in those of the right leg, or now in the muscles of the left, now in those of the right fore-arm, disappearing when walking in the open air (after 52 h.).

. Tearing, sometimes cutting pains in the limbs, the head and jaws, frequently only for a moment.

. Stretching-tearing pains in the scapulæ, upper arms, head and nape of the neck, increased by contact; after a meal, at which time the symptoms are most violent in the first days.

. Convulsions and contortions of the limbs.

. Paralytic twitchings of different parts of the body, especially the limbs.

305. Epileptic convulsions, with consciousness (eclampsia).

. At 4 o'clock in the afternoon, he was seized with a fit of spasmodic stretching of the body, afterwards trembling of the whole body, with blue lips and lamentations about pain in the chest, neck, and all the limbs.

. Paralytic pain in the arms and legs (for several days).

. The child is faint and sick.

. Moaning and groaning (in the afternoon).

310. Painful sensitiveness in all the limbs of the body, when moving or touching them.

. Morning and evening the symptoms are most violent.

[**Peculiarities** :—

Remission during day and evening.
Aggravation night and morning.
Ailments from Capsicum or abuse of Cinchona.
Worse from light, particularly candle-light.
Pred. worse from warmth, and growing warm.
" " from warmth of bed.
" " from warmth of stove.
" " during rest.
" " when sitting, particularly sitting erect.
" " when lying on side.
" " when resting suffering part on anything, when stretching it out, or bending it backwards.

Pred. worse after sleep.
,, ,, when swallowing drink.
,, ,, from pressure.
,, ,, when respiring deeply.
,, ,, from change of position.
,, ,, in cold *weather.*
,, ,, on an empty stomach.
Pred. better from cold.
,, ,, from lying on back.
,, ,, after lying down.
,, ,, in bed.
,, ,, after breakfast.
,, ,, after stool.
,, ,, while moving.
,, ,, when drawing up diseased limb.
,, ,, when moving suffering part.
,, ,, when sitting bent forward.
,, ,, in doors.
,, ,, in warm *air.*
,, ,, from rubbing and scratching.—Gross's *Comp. Mat. Med.* by Hering.]

32.—CINNABARIS (VERMILLION).

The symptoms of this drug in the *Materia Medica Pura* are very meagre. Hahnemann's experiments with the drug must have been very few in number. The following digest of symptoms is taken from the very able Essay of Dr. Neidhard of Philadelphia. The provings from which the symptoms were collected were altogether twenty in number,—three of the provers were females. None of the provers were made acquinted with the drug, till all the provings were finished. The 3rd trituration, 6th and 30th dilutions, decimal as well as centesimal, were employed in the provings. None of the provers were given a second dose, so long as they continued to experience symptoms from the first dose. The symptoms were recorded in the order they appeared, so as to obtain a complete history of the pathogenesis of the remedy. In the following digest the symptoms are in natural groups which, disclosing the consecutive action of the remedy in different parts of the body, have not been broken up; this has necessitated many repetitions at subsequent divisions. This is the reason why we have been obliged to abandon the classification we have been following, as also the numbering of the symptoms.

The Cinnabar employed in the provings was an artificial one, which, Dr. Neidhard says, was carefully prepared by Mr. John, Apothecary." He regrets he could not obtain native Cinnabar, which he would have preferred.

Abbreviations.

1. S. A.—Dr. S. Armor.
2. B.—Some women and girls proving under the direction of a friend of Dr. Hering's (3d trituration).
3. A. J. B.—A. J. Brewster.
4. J. P. D.—Dr. J. P. Dake.
5. H.—Hahnemann.
6. C. Hg.—Dr. C. Hering.
7. J. H. H—Dr. J. H. Henry.
8. Ktz.—from Koschwitz's translation of "*Schroeder's Arzneischatz.*"
9. L. Dr. A. Lippe.
10. A. L.—Dr. Albert Lindsay.
11. C. L. M.—Dr. C. L. Merriman.
12. J. L. M.—Dr. J. L. Mulford.
13. Nd.—Dr. C. Neidhard, including symptoms from three ladies, and from a patient of Dr. N.'s.
14. D. S. P.—Dr. D. S. Pratt.
15. J. M. R.—Dr. J. M. Randell.
16. J. C. R.—Dr. J. C. Raymond.
17. H. R.—Dr. Hamilton Ring.
18. Rt.—a prover who does not permit the use of his name.
19. C. E. T.—Dr. C E. Toothacher.
20. D. W.—Dr. Daniel Wilder.

The asterisk (*) is prefixed to curative symptoms.

Antidotes.

Sulph. and Bellad. mitigated the severe pain in head, but *Iodine* finally cured it. *Nitric-acid* aggravated it. (Nd 1st.)

Pathogenetic Symptoms.

Moral Symptoms and Head :-

(1.) Indisposition for mental labor. The head feels heavy as from long mental application ; a dull heavy ache in the front of the head to the occiput, mostly over the right eye and temples, with heat; occasional darting pains through the head from without inwardly. (A. J. B., 6th dil.).

Although intending to sit up and study longer, yet he felt so wearied in body, and confused in mind, that he soon retired. Upon lying down there were rumbling in the abdomen, and pains from the epigastric to the pubic region. There was also some nausea and uneasiness in the stomach. Every little noise about the house troubled him, as though it were something serious, Although accustomed to dream much, yet he had more troublesome dreams than usual. He awoke and started up several times without purpose: once with a heavy pain in the forepart of the head. Upon rising at 7 o'clock in the morning he felt a little giddiness and pain in the forehead, with a sensation of soreness in the eye-balls. These passed away soon after breakfast. Before noon acidity of the stomach, general headache, and heaviness of the eyes came on, somewhat as usual, but only much aggravated (J. P. D., 5 gr., 3d trit.).†

Heaviness in the head, desire to sleep during the day, restlessness at night, indisposition to mental exertion (H. R., 6th dil.).

The dulness of the head and unfitness for mental exercise have not after the lapse of a week, entirely disappeared (H. R., 6th).

Since taking the medicine it is quite difficult for him to fix his mind long on any subject. He cannot pay attention to the lectures so well as before. This sensation is relieved by the open air. He cannot think long, deeply and clearly on any subject, and his mind seems to be altogether disturbed (Rt., from 5 gr. of 3d cent. trit.).

Left cheek flushed, and left eye watery, sensation which soon passed off. Congested sensation over the whole head, particularly in the forehead ; great difficulty of collecting his ideas and studying usefully, and even aversion to close study. After retiring did not sleep for over an hour, but tossed about very nervous, and mentally vexed (Rt., 40 glob., 6th dil.).

The above symptoms of mind and head continued the same the next day (Rt.).

Sensation of having taken cold, and general feeling as not being fit for any mental labor ; depressed, melancholy, cynical state of mind ; nervous system excited (Rt., 3d.).

Restlessness and sleeplessness during the night from a constant flow of ideas changing from one subject to another (1st day. J. C. R. 30th.).

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† These and similar groups I have thought best not to separate, as they disclose the consecutive action of the remedy in different parts of the body forming true medicinal diseases, I did this at the risk of many repetitions at subsequent divisions.—Ed.

Forgetfulness of things which he has to do, and which, under other circumstances, he would not easily forget—as, neglecting to extinguish the light.

Forgets to notice the symptoms (C. Hg., 1st day, 3d trit.).

Fretful and inclined to weep; he reproaches others (B.).

* Mind clearer and more cheerful (5th, Nd.).

His mind is in a morbid state; he is disposed to fret at trifles, and is not at all satisfied with himself (1st day, 30th, Rt.).

• Next day a still more aggravated morbid state of mind; fretfulness; also sexual excitement on the least provocation (Rt. 30th.).

Great depression of spirits after meals (B.).

Pain in the organ of tune; sensation as if there was something in the ear. In the afternoon his friends remarked to him that he was very cross and sullen (1st day. J. W. R., 6th dil.).

Irascibility (J. H. H., 6th).

Involuntary thoughts and imaginations without occasion; fear of his or others falling, etc (C. Hg.).

* Mistakes of the imagination (Ktz.).

Yawning; not inclined to speak, and an intolerable feeling when spoken to (3d trit. L.).

Desire to be alone (3d, L.).

Giddiness, particularly on stooping (B.).

Vertigo and lassitude, particularly in the morning after rising (B.).

Giddiness, with nausea; pressing pain in the forehead disappearing after lying down and during sleep (B.).

Upon rising at 7 o'clock in the morning, he felt a little giddiness and pain in the forehead, with a sensation of soreness in the eyeballs. These passed away soon after breakfast (J. P. D. 3d, 1st day).

Dizziness in the head in the morning after rising (2d day, B.).

Dizziness and lightness in the head; soreness in the stomach, with tightness in the temples (Nd., 6th dil.).

Roaring in the head, half an hour after dinner, and in the evening before retiring, causing dizziness (H.).

Fulness and Determination of Blood to the Head:—

Fulness of the head very frequently (1st, 3d day, C. Hg.).

Fulness of the head and eyes, eyes reddened (C. Hg., 3d trit.).

Fulness in the head and about the eyes, which are red (3d L.).

In the evening occasional shootings in the upper part of left temple along the temporal ridge; dulness in the whole head, especially the forehead, just over the eyes; lame sensation in right shoulder joint (2d day, H. R., 30th).

Unusual drowsiness and heaviness over the eyes (Nd. 5th, 1st day).

In the forenoon, head full; nervousness and irritability about noon for a short time; also, for a short time, sticking pain in the back part of left knee joint; in the afternoon, sticking pain in the right knee joint, with a creeping sensation above and below it, seemingly about the bone, lasting about an hour (H. R. 1½ trit., 2d day).

Frequently itching over the body and itching in the internal and external canthi; head full, heavy, with strong pulsations of the temporal arteries; great inclination to sleep during the day (H. R., 1½ trit, 3d day).

Head less heavy the fourth day (H. R., 1½ trit.).

Symptoms of cold in the head; fulness of the head, discharge of much mucus from the nostrils; aching pain in the small of the back and in the legs. Uncommon tiredness and weakness. Sensation of emptiness in the stomach, and very hungry within two hours after eating a hearty breakfast; sore on the inside of the under lip towards the left (6th day, A. L.).

Symptoms of cold in the head, with lameness of the thighs; much mucus in lumps of a dirty yellow color from the posterior nares during the whole week (A. L., 6th).

Fulness and pressure in the forehead in the evening (Rt., 30th).

Occasionally, fever and fulness in the forehead (Rt., 6th).

* Symptoms of flatulency of the stomach, irregularity of the passages, pressing in the forehead, with a sensation of congestion to which the prover had been subject for some time, have now disappeared (Rt., 30th dil., and 3d trit.).

Determination of blood to the head the whole day (12th day, C. Hg)

Flatulence after congestion to the head in the forenoon, during the first day (C. Hg.).

Left cheek flushed and left eye watery sensation, which soon passed off. Congested sensation over the whole head, particularly in the forehead; great difficulty of collecting his ideas and studying usefully, and even aversion to close study. After retiring, did not sleep for over an hour, but tossed about, very nervous and mentally vexed (Rt., 6th.).

At 5 P. M., strange congestive sensation about the head, principally in the forehead, after taking 5 gr. of 3d trit., at 12 M. (Rt.).

The determination of blood to the head, particularly to the vertex, is aggravated when eating, so as to interrupt his meal (C. Hg.).

At 10 o'clock in the forenoon, when rising from the stooping posture,so violent determination of blood to the head and neck, accompanied by dizziness, as nearly to deprive him of his senses (1st day, C. Hg.).

Rush of blood to the back part of the head, attended with violent itching and heat, extending to each ear, and behind the left ear there came three hard lumps, one of the size of a small shot, the other that of a buck-shot, and the last a size larger: on the same night he felt a sharp pain in the region of the kidneys, as if some one had driven a nail on each side of the vertebra. A more profuse discharge of clear urine. Flow of mucus from the nostril, lasting for three days (one hour after taking 20 pellets 6th dil. J. H. H.).

* A great number of persons have been relieved by Cinnabaris, of congestion of blood to the head (Nd.).

In two hours after taking the medicine, he felt a fulness and general pressure in the whole head, as after taking cold, with dull aching pain in the region of benevolence; better in the open air (C. L. M., 6th).

Intense headache, relieved by external pressure. This pain was so severe that he could hardly endure it. The pain in the head is so severe that he can scarcely raise his head from the pillow. It lasts from ½ past 12 to 6 P. M. (1st Nd.).

The headache is much worse after sleeping (1st Nd.).

Dull feeling in the head and pressing headache; ameliorated in the open air; disappearance of the pain after bleeding of the nose; after bleeding ceases, general uncomfortable feeling (in 8 days, B.).

(He had formerly some dullness of the head, and sometimes a pain on waking, especially after drinking milk the night before; also some dryness and foul taste in the mouth, but these symptoms were far less decided since he had been taking the medicine.) (A. L., 6th.).

Pressing headache, occassionally a digging and gnawing in small spots, for the most part in the upper and left side of the head 300. (C. Hg.).

Forehead, pains over the eyes, and concomitant symptoms:—

Occasional pains in the sinciput (C. E. F., 5th, 2d day.).

A sharp steady pain in the forehead, mostly in the right orbital region: soon after, felt a sharp throbbing in the left hypochondrium in the region of the spleen, after four hours. A dull aching pain in the bones of the forearms and legs, in 11 hours (A. J. B., 3d.).

In half an hour, a sharp aching pain in the right supra-orbital region, shooting backwards to the ear and side of the neck. Front of the head very hot. The pain in the head is worse in the warm room, and on moving the eyes and scalp.

In eleven hours, at 10 P. M., the same pain is increased to a heavy stupefying ache, aggravated by thinking, reading and pressure. Tenderness in the epigastric region.

In the morning better, but in the evening the pains in the head return again, with a numbness and heavy aching in the arms and knees, and lower legs, without another dose.

The same pains in the head return also in the morning at 11 o'clock with a disposition to fall asleep while trying to listen to the lecture, notwithstanding his making a great effort to keep awake; constrictive feeling in the umbilical region, urine tinged yellow. Pains all aggravated in the evening. Better in the open air, and after eating and sleeping (A. J. B., 3d).

In the morning a sense of general prostration, great weakness of the whole system, as after a severe illness. Indisposition for mental labor. The head feels weary as from long mental application.

A dull heavy ache in the front of the head, from before backwards, mostly over the right eye and temple, with heat in the head. Occasional darting pains through the head from without inwardly (A. J. B., 6th, 1st day).

Pain in all the joints with lameness during the day. Dull pain in the forehead, which is cold, and is relieved by the warm hand. Aching soreness of the eyes, worse in the evening (D. W., 6th, 2d day).

During the first day, he experienced on the bridge of the nose a sensation similar to that produced by touching it with a metallic substance. Sticking pains about the punctum lachrymale of the left upper eyelid (H. R., 30th).

A space about the size of a quarter dollar just above and between the supra-orbital ridges (root of the nose?) felt as if pressed upon by a cold metallic body, while within the cranium underneath, there seemed to be more warmth than usual (J. P. D.).

* A dull pain, felt before in the left temple and side of the forehead, disappeared (J. P. D., 3d).

An hour after taking the medicine, an uneasy, creeping, and pressive sensation about the ossa nasi, lasting about an hour, and is the sensation experienced by most persons on putting on a pair of heavy spectacles, if not accustomed to wear them. Also for a short time a pain and sensation of fulness in the meatus of the ear. In the evening, a sensation of approaching looseness in the bowels (H. R., 1½ trit.).

Pain in the forehead (region of causality). A sensation of sticking over secretive region, which increases and becomes a numb pain, extending to the right temple (time and locality), with a feeling of warmth on the right side. Disposition to sleep during the day. The pain extends from one temple to the other across the os frontis from right to left, is mild in the forehead, but violent in the organs of locality and time, both night and day, and on rising in the morning. Before going to bed there is a drawing pain in the head, extending from the crown to the occiput, inclining to the right. Pain deep-seated, as if in the centre of the head (I. H. H., 6th).

Almost every morning after waking, a kind of dull pain (some morning more intense and sharper) in the forehead and top of the head, worse when lying on the left side and back, going off when turning to the right side and pressing the forehead with the pillows. As soon as he turns to the leit side or back, the pains return. On turning to the right side, or getting up, or washing, the pains disappear (A. L., 6th).

On waking up in the morning had an aching pain in the whole of the forehead and top of the head; aggravated by lying on the left side and back; relieved by lying on the right side and pressing the forehead with the pillows. A dull, heavy, and at times a sleepy feeling during the day)W. L., 3d., 1st day).

Although accustomed to dream much, yet he had more troublesome dreams than usual. He awoke and started up several times without purpose: once with a heavy pain in the forehead. Upon arising in the morning he felt a little giddiness and pain in the forehead, with a sensation of soreness in the eye-balls. These passed away soon after breakfast. Before noon, acidity of the stomach, general headache, and heaviness in the eyes, came on, somewhat as usual, only much aggravated (J. P. D., 3d).

Pain in the forehead; sticking in the chest just beneath the sternum; griping pain in the bowels (J. M. R., 6th).

After taking the medicine the night before, he had an increased flow of saliva the next day, so much so, that when he attempted to speak he found some difficulty, from his mouth being filled with saliva. He had some pains of a dull character in the forehead over the eyes in the afternoon, which became more severe in the evening, and was aggravated by motion. Had occasional pains in the left side of the chest, between the cartilages of the 5th and 6th ribs.

The second day the flow of saliva still continued; in the afternoon he had again a dull aching pain in the right forehead, aggravated in the evening; also a return of the pains in the left side of the chest in the region of the heart of a sharp, cutting character, producing a difficulty of breathing (J. C. R., 30th).

Dull pain in the forehead, which [illegible] cold, and relieved by the warm hand; aching soreness of the eyes, worse in the evening; pulse rises from 60 to 80 in the evening; aching soreness in the teeth. Eructations of wind from the stomach; sores on the mouth on the under lip. Severe pain in the forehead, which lasts all night; great restlessness and nervousness; a good deal of mucus at the posterior nares, which comes away in lumps (D. W., 6th).

Dull pain in the forehead the entire day (B., 9th day).

Pressing pain in the forehead, which spreads upwards, seems to be between the external skin and the muscle; it is aggravated by lying and pressing upon the pillow (B.).

Pain in the right side of the forehead, then in the left, where it is more violent, and draws downwards to the chest; it again recurs somewhat later, diminished by exercise and perspiration (B.).

Pressing in the forehead at five o'clock in the morning, before rising, with dizziness and nausea; disappears after rising and eructations of wind (B.).

Throbbing in the forehead at noon (3d day B.).

Pricking pain in the forehead during the whole night (B.).

Shooting pains in the forehead, with great heaviness.

Shooting pains in the inner canthus of the right eye, with a burning and itching.

Hoarseness of the voice in the morning, passing off in two or three hours.

Shooting pains in the bowels at intervals during the day. Flushes of heat confined to the abdomen, with great flatulence: all the above symptoms more in the forenoon, and less in the afternoon and evening (J. L. M., 1st).

Temples and Sides of Head:—

Pain from the right lachrymal duct around the eye to the temple.

Drawing from the right inner canthus across the malar bone to the ear (J. H. H., 6th).

Dulness in the head, mostly on the right side and towards the posterior part, and about the right ear, in the forenoon after some hours (C. Hg.).

Sensation of fulness and weight across the temples, with sometimes throbbing over right temple, worse on motion (for half an hour, Nd., 5th).

Occasional flashes of pain in right temple, from in front backwards (organ of mirthfulness), soreness in roof of mouth. Heaviness in head, desire to sleep during the day, restlessness at night, indisposition to mental exertion (H. R., 6th, 1st day).

Pain darting through from the sides of the head and the temples. The pain is near the edge of the outer orbit of the right eye, and more frequent on the right side of the head than the left. Constant pain in the right side of the head. From the temples the pain goes to the occiput (Nd. 1st).

A sensation of sticking over secretive region, which increases and becomes a numb pain, extending to the right temple, with a feeling of warmth on the right side (J. H. H., 6th).

Pressing pain in the right temple (D.r S. P., 3d).

Pain in the left side of the head, temple and supra-orbital ridge. Sensation as if the abdomen was too large, and wishes to have every thing loose about the bowels. Numb pressing pains in the eyes. Numb feeling in the elbows, as if the ulnar nerve was compressed; also numbness in the knee joints. Hands cold (J. M. R., 6th).

In the evening occasional shootings in upper part of left temple, along temporal ridge; dulness in the whole head, especially in the forehead just over the eyes; lame sensation in the right shoulder joint (H. R., 6th, 2d day).

Dizziness and lightness of the head; soreness of the stomach, with tightness of the temples (Nd., 6th).

Frequently itching over the body and itching and sticking in the internal and external canthi, head full, heavy, with strong pulsations of temporal arteries, great inclination to sleep during the day (H. R., 1½, 3d day).

Three or four hours after taking the 3d decimal trit. of Cinnab. in the morning, his abdomen, below the transverse colon, felt hot, his tongue was covered with a white fur and there was a beating and burning in both temples, which he felt all day (S. A.).

Occiput and Crown of Head:—

An hour after taking the medicine in the morning, he has a violent pressing pain in the occiput, also in the left side of the head for two hours. In the afternoon she was obliged to lie down and sleep, after which the pain disappeared (B.).

A great increase of the flow of urine and saliva, lasting one hour, with shooting pain on the left side of the head from the occiput to the forehead; flow of tears (Nd., 6th).

On turning the head, pain on the right side of the neck, below the sterno-cleido-mastoideus muscle. Pain in the back part of the neck, when the head is thrown back, extending to the occiput. The muscles in back part of the neck seem as if contracted. General pain all over the back down to the loins, worse after every dose of the medicine, aggravated on drawing a long breath (J. H. H., 6th).

Before going to bed, there is a drawing pain in the head, extending from the crown to the occiput, inclining to the right. Pain deep as in the centre of the head (J. H. H., 6th).

In addition to the restlessness and dreaming, he woke up with a throbbing pain in the organ of conscientiousness, extending to the forehead over the eye (the night after taking 6th, A. L.)

About 4 A. M., was awaked by a dull sticking pain in the region of the left kidney, which lasted but a short time; afterwards tossing about and sleeplessness for an hour; after rising from bed, a fulness and pressure in the occiput and back of the neck, continuing with much severity till about noon, after which the symptoms somewhat abated; heaviness and sleepiness during the day; pains of short duration in the right hypochondrium, in middle of the left breast, in front in the left kidney and in the occiput; itching over the body at times. In the evening, sticking pain in the region of the left side of the fifth and sixth dorsal vertebræ; a sore spot on the right side seventh and eighth ribs, which he had felt before, continues. It is very sore to touch, with occasionally a sore spot in and around it; during the day there were pains at a corresponding spot on the left side of the same character as the pains connected with the other, but without a sore spot (H. R., 1½, 5th day).

The next day, occasionally a sticking pain in the right side of the same dorsal vertebræ (5th and 6th); pain sometimes in the left side of occiput (organ of amativeness); itching of the eyelids and of various parts of the body; sore spot in the right side continues for three or four days (H. R., 1½, 6th day).

Eruption on the posterior cervical region and soreness from right ear into the middle of the posterior cervical region as if the glands were affected, which continues for seven days, but it gradually decreases in severity (Rt., 6th).

Scalp:—

About 9 o'clock in the morning a sore pain, commencing at the crown of the head and extending as far as the organ of veneration (at times a slight sensation of throbbing), it is very sensitive to the touch—he cannot even touch the hair, without causing a sore pain (the sixth and seventh day). Weakness and sleepiness in the eyes about noon, could scarcely keep them open (6th day, 3d, A. L.).

Sensitiveness of the head to the touch; even the hairs are sore (H.).

Pricking about the exterior part of the head, only during the day (H.).

Head excessively sore on the outside to every touch (1st, Nd.).

* Has cured thousands as "*specificum cephalicum*" (Ktz.).

Eyes:—

Shooting pains in the inner canthus of the right eye, with a burning and itching (J. L. M., 1st).

Head excessively sore on the scalp to every touch; pain darting through from the sides of the head and temples. The pain is near the outer edge of the orbit of the right eye, and more frequent on the right side of the head than the left. Constant pain in right side of head. From the temples the pain goes to the occiput; excessive lachrymation (Nd. 1st trit.).

(Inflammation of the right eye; itching, pressing, and pricking at the inner angle and the lower lid; constant lachrymation on looking steadily, with profuse discharge of mucus from the nose.) (H.)

Pain from the lachrymal duct around the eye to the temple. Drawing sensation from the right inner canthus across the malar bone to the ear. A sensation as if there were something in the eyes, lasting three days; feeling as if the eyelids were enlarged or puffed, as if the muscles were too short, when looking up the wall. Pain from the inner canthus of the left eye across the eye-brows (organs of size, color, order, calculation). Itching of the lids of both eyes (J. H. H., 6th).

Redness of the corners of the eyes, mostly at the inner angles; right eye more affected than the left; cornea appears encircled by a red ring. All these symptoms are aggravated in the evening during the first day (B.).

Eyes watery and dull, with a sharp sticking pain in the inner canthus of the left eye, as of a sharp stick being stuck in the lower lid (A. J. B., 6th; 2d day).

Pain in the inner canthus of the left eye, with redness and swelling, mostly towards the lower lid (C. Hg.).

Left eye watery sensation occasionally, for three days, passing off each time in a few minutes (Rt., 6th).

Flow of tears (Nd., 6th).

Sticking pain about the punctum lachrymale of the upper eyelid.

A small pimple (like a transparent vesicle) sore to touch, on the inner edge of the eyelid near the spot where the pain was, which latter had disappeared (H. R., 2d day).

Itching of eyelids and various parts of body (H. R., 1st).

Frequently itching over the body, and itching and sticking in the internal and external canthi; felt for eight days (H. R., 1st).

In the eyes for two days excessive itching in the inner canthi, from six o'clock the first evening.

From nine to twelve o'clock; frequent and severe itching in the outer canthi, with a sense of stiffness in the upper eyelids. In the afternoon when sitting in the house, a sensation as if a breeze of cold air was blowing upon the eyes; very marked. Eyes very sensitive to cold air in walking out (C. E. F., 5th).

Redness of the inner angle of the eyes during the day (B.).

Redness of the whole eye, with swelling of the face (3, L.).

Livid circles around both eyes (J. H. H., 6th).

Weakness of the eyes, with redness of the corners; burning pain (3d day, B.).

A weak sensation in the left eye during the 18th (A. L., 6th, 2d day).

About nine o'clock in the morning a kind of sore pain, commencing at the crown of the head, and extending as far front as the organ of veneration; it is very sensitive to touch; he cannot even touch the hair, without causing a sore pain. This pain continued all day; weakness and sleepiness in the eyes about noon; could scarcely keep them open (A. L., 6th day; 3d).

Eyes weak and over-clouded (5th day, B.).

Aching soreness of the eyes, worse in the evening (D. W., 2d day; 5th).

Upon rising in the morning he felt a little giddiness and pain in the forehead, with a sensation of soreness in the eye-balls. Before noon acidity of stomach; general headache and heaviness of the eyes (J. P. D., 3d).

Numb pressing pain in the eyes (J. M. R., 6th).

*Fulness of the head and eyes; eyes reddened (C. Hg., 3d).

Ears:—

Pressing, forcing pain deep in the right ear, inwardly towards the neck after sitting down; disappears while sitting, with dizziness after two hours in the forenoon (C. Hg.).

Continued restlessness, and dreams a lump is in his throat and right ear (A. L., 6th).

In half an hour felt a sharp aching pain in the right supra-orbital region, shooting backwards and downwards to the ear and side of the neck; front of head very hot; the pain is worse in warm room, and on moving the eyes and scalp (A. J. B., 3d).

Drawing sensation from the right inner canthus across the malar bone to the ear (J. H. H., 6th).

Much itching in the right ear, and after using the ear-pick a pain deep in the ear the 9th day (C. Hg.).

The right external ear becomes numb whilst sitting in the carriage the 4th day (C. Hg.).

Rush of blood to the back part of the head, attended with violent itching and heat extending to each ear, and behind the left ear there came three hard lumps, one the size of a small shot, the other that of a buckshot, and the last a size larger (J. H. H., 6th).

For a short time a pain and sensation of fulness in the meatus of the left ear (H. R.; 1st day, 1½ trit.).

At 10 P. M., sensation of water in the left ear, which soon passes off (Rt., 3d; 1st day).

Much itching in the left ear from the 1st to the 4th day; scurfy eruption in the right external ear, between the helix and anti-helix, the 4th day (C. Hg.).

Aching in both ears, lasting about fifteen minutes (Nd., 5th).

Noises in the ears after eating (Nd., 1st).

Roaring in the ears, with swelling of the face (3d, L.).

Face and Nose:—

Great heat in the face (while triturating the medicine from 11 to 12 o'clock A. M.), which is much swollen, mostly about the eyes (3d, L.).

Heat and swelling of the face; afterwards pain in the back part of the head (3d, L.).

In the evening left cheek flushed; left eye, watery sensation, which soon passed off (Rt., 1st day, 6th).

Itching on the left side of the face (J. H. H., 6th).

Pain in the left side of the face and teeth (J. M. R., 6th).

Tickling in the nose, obliging her to pick it with the fingers, after the 8th day (B.).

(Violent pricking, jerking in the nose, particularly when eating during the 1st day.) (C. Hg.).

(Sore in the nose in both nostrils at the point until fall, and also in the spring, 1848) (C. Hg.).

Itching of the nose, with bleeding, after blowing it. The blood is very dark. The itching is caused by pimples at the right nostril (J. H. H., 6th).

Symptoms of a cold in the head, with lameness of the thighs; much mucus, in lumps of a dirty yellow color, in the posterior nares during the whole week (A. L., 6th).

Symptoms of cold in the head; fulness of the head; discharge of much mucus from the nostrils; aching pain in the small of the back and legs (A. L., 3d, 5th day).

A good deal of mucus at the posterior nares, which comes away in lumps (D. W., 6th, 2d day).

Flow of mucus from the right nostril, lasting for three days (J. H. H., 6th).

*Irritaton in the throat, posterior nares, tonsils, and fauces (D. S. P., 3d).

An hour after taking 1st trit. an uneasy, creeping, and pressing sensation about the ossa nasi, lasting about an hour, and is the sensation experienced by most persons on putting on a pair of heavy spectacles, if not accustomed to wear them (H. R.).

During the 1st day he experienced on the bridge of the nose a sensation similar to that produced by touching it with a metallic substance. Sticking pains about the punctum lachrymale of the left upper eyelid (H. R., 30th).

A space about the size of a quarter dollar just above and between the supra-orbital ridges (root of nose), felt as if pressed upon by a cold metallic body, while within the cranium underneath there seemed to be more warmth than usual (J. P. D., 3d).

Teeth and Mouth:—

Pain in the molar teeth of right side (J. H. H., 6th).

Aching soreness in the teeth (D. W., 6th; 2d day).

The 11th day much bleeding from the incisor tooth of upper jaw in right side.

*Both corners of the mouth are chapped (C. Hg.).

Sensation of emptiness in the stomach, and very hungry within two hours after eating a hearty breakfast; sore on the inside of the under lip, towards the left (A. L. 3d, 6th day).

A whitish furred tongue in the morning (J. H. H., 6th).

Three or four hours after taking the medicine in the morning, his abdomen felt hot below the transverse colon; his tongue is covered with white fur, and there is beating burning in both temples, which he felt all day (S. A., 2d).

A small sore on the right of the tip of the tongue, also on each lip, continuing several days (C. E. T., 5th).

Regurgitation of wind from the stomach; sores in the mouth on the under-lip (D. W., 6th, 2d day).

Small sore on the roof of the mouth (J. H. H., 6th).

A sore spot on the tip of the tongue (H. R., 1½ trit., 4th day).

At six o'clock in the evening, after taking the medicine in the morning, sensation of soreness on the left side of the root of the tongue, on swallowing, accompanied with roughness and stiffness, continuing through the night (C. E. T., 5th).

Taste as of tobacco and coffee in the mouth; pricking sensation in the mouth and fauces; small spot on the left side of the tongue, which itches, small sore on the roof of the mouth; itching on the left side of the face (J. H. H., 6th).

Soreness in the roof of the mouth (H. R., 6th, 1st day).

Sensation of contraction, and burning in the roof of the mouth (H.).

Dryness in the mouth, burning of the throat and the whole breast, with general weakness (14th dil., C. Hg.).

Much dryness of the mouth and throat at night; obliged to drink often; some pricking under the back part of the tongue (H.).

Dryness in the mouth, with desire for cold water: bad taste in the mouth, with phlegm and ptyalism (Nd., 1st).

(Increased dryness of the throat and mouth, being obliged to moisten and rinse the mouth every time he wakes up) (A. L., 6th).

* Inflammation, with great dryness in mouth and throat; worse at night. In several cases $\frac{1}{200}$ helped very quickly (Pehrson).

* Dryness and irritation of the throat (posterior nares, tonsils, fauces) at night, with soreness in the morning; secretion of tenacious mucus during the day; inclination to empty deglutition (D. S. P., 3d).

On waking at eight o'clock, after taking the third trituration the previous night his throat is dry; he is thirsty; sensation as if he had not a refreshing sleep (Rt.).

Pressing contracting pain in the throat during empty deglutition (H.).

Fulness in the throat, creating a desire for constant swallowing; 1st day (C. Hg.).

The cravat presses him uncomfortably, as if the throat was pressed together from below on both sides, and contracted within, so as to impede swallowing; forenoon of the 1st day (C. Hg.).

* Dryness and foul taste in the mouth (A. L., 6th).

Bitter taste in the mouth before, during, and after meals (B.).

Bitter eructations (B.).

Bitter taste in the mouth in the morning; remains after eating (B.).

Taste of tobacco and coffee in the mouth (J. H. H., 6th).

At eight o'clock P. M., after tea, a peculiar metallic taste in the mouth, not much unlike sulphate of zinc, or the taste left after a metal or salt, continuing more or less one hour (1st day).

At five o'clock next morning a peculiar agreeable sensation of exhilaration, with a fulness extending from all sides of the chest towards the stomach and heart, accompanied or followed by a similar sensation in all the joints, continuing with intermissions till eight o'clock. A peculiar drawing in the mouth after rising, until breakfast; a small spot on the right side of the tip of the tongue; also on each lip, continuing several days. At two o'clock P. M., sensation in the mouth continued; since eight o'clock modified by a continued tendency to hawk and spit, with unusually large flow of saliva and mucus; also a sensation of warmth under the sternum, as if secretions were flowing from the stomach, and all the mucous surfaces, as well as from the salivary glands (C. E. T., 5th).

An increase of the flow of saliva, and a pain running near the ensiform cartilage, from the 7th rib of the right side diagonally through the chest (Nd., 3th).

A great increase of the flow of urine and saliva, lasting one hour, with shooting pains on the left side of the head, from the occiput to the forehead; flow of tears (Nd., 6th).

Salivation (Noack and Trinks).

Scanty, tenacious, frothy saliva in the mouth, as after long thirst, still without thirst; after drinking, it passes away; during the first day (C. Hg.).

Running of water from the mouth every morning before rising; pressure in the throat as from eating tart pears; vanishes after getting up (B.).

Slight accumulation of very tenacious and yellow saliva at rising in the morning (2d day, C. Hg.).

Less mucus in the throat during third day (C. Hg.).

An increased flow of saliva (J. C. R., 2d day, 30th).

The same day from four to five o'clock P.M., a severe pain extending from the cartilage of the 7th rib at its junction with the sternum to the right hypochondriac region under the inferior border of the tenth rib.

The two following days he took every night 40 to 60 globules of 30th; then again for two nights 5gr. of $\frac{1}{10}$ without any perceptible effect until the next day, when there was increased sexual desire with erections, which continued at night, terminating with an emission of semen. The following night again Cinnab. 30th, 20 globules. The next day an increased flow of saliva, so much so, that when he attempted to speak, he found some difficulty, from his mouth being constantly filled with saliva. He had some pain of a dull character in the forehead over the eyes in the afternoon, which became severer in the evening, and was aggravated by motion. Had occasional pains in the left side of the chest, between the cartilages of the 5th and 6th ribs.

The following day the increased flow of saliva still continues; in the afternoon also dull aching pain in the right forehead; worse in the evening, when also the pains in the left side return in the region of the heart, of a sharp cutting character, producing a difficulty of breathing (J. C. K.).

(I have perceived in other cases that the effect of the remedy often only shows itself after repeated doses; the salivation mentioned above is not merely to be considered as the effect of the last dose, but also of those previously taken, and for this reason have kept intact the whole group) (Nd.).

Stomach:—

Great appetite and desire for an embrace (H.).

Great appetite, with thirst and strong sexual desires (H.).

Increases the appetite during the day (C. Hg.).

Good appetite in the morning, somewhat rare with him, second day (C. Hg.).

Increased appetite in the morning, the 3d day (C. Hg.).

Strong appetite, but very soon satisfied. He feels better than usual after meals, the 1st day (C. Hg.).

Decidedly better appetite, but less eating the 1st to 3d day (C. Hg.).

(Roast veal has a spicy taste, and like mushrooms) (C. Hg.).

No appetite; aversion to all kinds of food (H.).

No appetite in the evening the 2d day (B.).

Loss of appetite; eats very little (Nd., 1st).

Aversion to coffee (B.).

In the morning appetite greatly impaired; but little appetite for breakfast after taking the remedy the preceding night; feels better in the open air and after dinner; pulse 60; skin moist and cool (A. J. B., 2d day, 6th).

Symptoms of cold in the head; fulness of head, discharge of much mucus from the nostrils; aching pain in the small of the back and legs. Uncommon tiredness and weakness. Sensation of emptiness in the stomach, and very hungry within two hours after eating a hearty breakfast. Sore on the inside of the under lip towards the left (A. L. 3d, 6th day).

Aching soreness in the teeth. Regurgitation of wind from the stomach; sores in the mouth on the underlip; severe pain in the forehead, which lasts all night; great restlessness and nervousness, a good deal of mucus at the posterior nares, which comes away in lumps (D. W., 6th, 2d day).

After eating, a very uncomfortable feeling as if the body was swollen and distended. Distressed feeling about the breast and stomach (H.).

Although intending to sit up and study longer, yet feeling wearied in body and confused in mind, he soon retired. Upon lying down there were rumblings in the abdomen, and pains passing from the epigastric to the pubic region. There was also some nausea and uneasiness in the stomach. Every little noise about the house troubled him, as though it were something serious. Although accustomed to dream much, yet he had more troublesome dreams than usual. He awoke and started up several times without purpose; once with a heavy pain in the forepart of the head. Upon rising at 7 o'clock in the morning, he felt a little giddiness and pain in the forehead, with a sensation of soreness in the eyelids. The acidity in the stomach, general headache and heaviness of the eyes, to which he is subject, is much aggravated beforenoon (J. P. D., 3d).

At 5 o'clock next morning, a peculiar agreeable sensation of exhilaration, with a fulness extending from all sides of the chest towards the stomach and heart, accompanied or followed by a similar sensation in all the joints, continuing with intermissions till 8 o'clock (C. E. T., 5th), see K.

Although Cinnabaris, when taken in the stomach, is not digested, nor forms a constituent of our bodies, it does, nevertheless, as an alterative, wonderfully exhilarate the archæum, as long as it remains in the stomach (Ktz.).

*Symptoms of flatulence of the stomach, irregularity of the passages, pressing in the forehead, with a sensation of congestion, to which the prover had been subject for some time, have now nearly disappeared (Rt., 3d).

Dizziness and lightness in the head; soreness in the stomach, with tightness in the temples (Nd., 6th).

In the evening, pain in the head, increased to a heavy, stupefying ache, aggravated by thinking, reading and pressure. Tenderness in the epigastric region (A. J. B., 3d, 1st day).

Nausea, gaping and salivation, disappear on ceasing to triturate, but the heat and swelling of the face continue (3d, L.).

Nausea in the morning at 11 o'clock, the 3d day (B.).

Nausea alleviated by windy eructation (B.).

Rising nausea in the afternoon, soon after taking the medicine (B.).

Nausea in the evening, and then a pressure on the sternum upwards, as from water brash (B.).

Slight nausea and salivation (3d, L.).

Drowsiness after supper, with nausea and water-brash, a burning from the breast upwards (B.).

Drawing sensation in the mouth, continued from 8 A. M. to 2 P. M., when it was modified by a continued tendency to hawk and spit, with an unusually large flow of saliva and mucus, also, a sensation of warmth under the sternum, and sense as if the secretions were flowing from the stomach and all the mucous surfaces, as well as from salivary glands (6th, C. E. T., 1st day).

Inclination to vomit, immediately (H.).

Nausea at 9 o'clock in the evening, then bilious vomiting, with much choking, and swelled face (2d day, B.).

Green vomiting, with violent choking, more in the night than in the morning (B.).

Anxiety about the heart, and vomiting (Geoffroy, Mat. Medica, Leipsic, 1760, vol. 1st, page 360).

(To be Continued.)

EDITOR'S NOTES.

CARBOLIC ACID IN FRESH WOUNDS AND SUPPURATING SURFACES.

Against this fashion of the day Dr. Hiller* writes as follows in the *North Amer. Journ. Hom.* (Nov. 1873):—

Carbolic Acid does not prevent complications nor constitutional disturbances; nor does it prevent sloughing.

It retards the process of healing and destroys granulation.

Wounds dressed with *Carbolic Acid* leave unsightly cicatrices.

It is a life-destroying poison, especially remarkable for its toxic action on microscopic forms of life, both animal and vegetable.

Its disinfectant qualities are supposed to be due to this destructive power, but the theory on which its use has been founded is not well-established, and in practice its efficacy is very doubtful.

ELECTROLYTIC TREATMENT OF MALIGNANT TUMORS.

Neftel is the great advocate of this method which "consists in sticking needle-electrodes in different parts of the tumors, which may be done at different sittings, following one another at short intervals; afterwards, *and for some time, weak currents must be carried with flat electrodes through the tumor.*" This after-treatment is considered of great importance. In opposition to Bruns who believes cauterization consequent upon the passage of currents to be the cause of diminution of the tumors, Neftel believes that electrolysis "changes protoplasm in the cells, wherever the force of the current reaches, and they thus lose their vital qualities; carcinomatous parts, as microscopic preparations show, are more easily affected by currents of a certain force than healthy tissue, they become more readily turbid, and finally are entirely destroyed, although the excessive power of proliferation in the neoplasm sometimes destroys the desired result." In support of this view cases are cited in which tumors have disappeared by absorption, *without* eschars and suppuration.

THE LATE PROF. CUTCLIFFE.

As illustrative of the man we publish the following letter which the late Prof. Cutcliffe wrote to us after perusing our review of his Introductory Lecture to the Students of the Calcutta Medical College:

MY DEAR DR. SIRCAR,—I am very much obliged to you for your kindness in sending me the August number of your *Journal of Medicine.*

Your remarks have not, I am sure, been penned with a view to flatter: I am equally sure that your criticism has been written in a most friendly spirit, and I hope that it may be agreeable to you to be aware that it is most gratifying to me to know that my lecture was so well received.

I thoroughly believe in the truth of what you say of the gratitude of the Hindu pupil to his preceptor. On the question of discipline, however, I would remind you that all my audience were not Hindus, and that some portion needs rigidity more than another. I think too you will be pleased to know from me that the recent disturbance at the College was limited entirely to those of the native students who may be regarded as young and undisciplined, or partially diciplined,—to students of the 1st, 2nd and 3rd years and to Christian students. It is no more than simple justice to the 4th and 5th year (disciplined) native students, to point out that they were in no way mixed up in the troubles. Without an exception, their conduct was most exemplary. It gives me real pleasure to say that nothing could have exceeded the propriety of the conduct of the students (native) of my class, i. e., to 4th and 5th year men. They discountenanced the turmoil, and conducted themselves in a strictly orderly and regular manner, doing their hospital work, and attending their lectures, as though nothing had happened to disconcert the harmony of those about them. Their conduct on this and other occasions fully justified my statement—"Happily the conduct of students of this College is *generally* so good that the controlling influence of their superiors rarely extends beyond suggestions."

"Boys will be boys;" and if boys of different nationalities, feelings, and tastes be jammed into over-crowded rooms, it is not necessary to search far and deeply in order to understand how some trivial excitement may light up a conflagration which may not be readily extinguished in a moment to the very embers.

With the Junior Classes, as you know, I have very little to do. I confine my remarks, therefore, to the 4th and 5th year students, and I do not hesitate to affirm that a more orderly, well conducted, and attentive class of medical students can no where be found than those which I have the very great pleasure to preside over.

29 Chowringhee
October 2nd, 1873

Believe me
Yours very sincerely
H. C. CUTCLIFFE.

THE BURDWAN FEVER.

(Communicated.)

[The Fever Epidemic, which has been raging in Lower Bengal for some time past, has been recently, but very wrongly, christened as the "Burdwan Fever." One of the first acts of Lord Northbrook, on his assumption of the Vice-royalty of India, was to offer a Prize for the best Essay on the Fever, to be competed for only by the Graduates of the Calcutta Medical College. The time allowed for the preparation of the Essay was only one year, —the date of the Notification was July 1872, and the competing essays were required to be produced on or before the 1st Aug. 1873. In our number for July and Aug. 1872 we remarked that "the time allowed was insufficient," because the thermometry of the disease could not be completed in one year, but chiefly because the investigation of the cause could not be carried on, far less completed, in that short time. Our apprehensions have been realized. The Morning Papers have just announced that the Examiners, "the Principal of the Medical College and the Sanitary Commissioner for Bengal do not consider any of the dissertations submitted in competition deserving of the prize."* This is unfortunate, as the whole community were in anxious expectation that some definite conclusions would be arrived at regarding the epidemic, if not its whole mystery cleared up, by the successful Prize Essay. It was thought that the causes of the Epidemic, which are hitherto shrouded in the deepest obscurity, and which have hence given rise to the wildest speculations about them, would be at least approximately traced, if not link by link, to the ultimate physical change or changes in the soil, or in the atmosphere, or in the mode of living of the people, or in all combined. It was thought that the depredations of the disease in the human organism would be studied with the minuteness and the accuracy necessary to the discovery of its true pathology and of its appropriate therapeutics. But alas! our expectations were doomed to be disappointed. Under these circumstances we give insertion with pleasure to the following Essay on the Causation of the Epidemic, which has been kindly sent to us by a gentleman, whose opinions on the subject, based as they are upon personal and minute knowledge, are entitled to respect, though we may not be disposed to give them our unconditional assent. Our readers are aware that our leaning is to the so called "Drainage Theory," of which the Hon'ble Digambar Mitter is mistakenly supposed to be the originator, but which he certainly has upheld with praiseworthy pertinacity in the face of much opposition, and that opposition, strange to say, from the Medical Profession.—*Editor.*]

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* "His Excellency, however, hopes that by allowing another trial, an essay worthy of acceptance may yet be received, and with this view he has decided to renew the offer of a prize (of one thousand rupees value) on the same general terms as before. Essays must be submitted on or before the 1st July 1874. The Judges will still be the Principal of the Medical College and the Sanitary Commissioner for Bengal."

The devastation of the Epidemic has a very sad tale to tell. Countries that once smiled with peace, health and prosperity, have been turned into hot-beds of disease, misery and death. Villages that once rang with the cheerful merry tone of healthful infants, now resound with loud bewailings and lamentations. Huts which offered too little space to their occupants are left without a tenant. The skulls of human beings have ceased to shock the sight, they now strew the fields at every few yards' distance. And this deplorable condition has come on and is continuing in defiance of the strenuous effort of the Government to limit its area of devastations. Clever brains have been employed in the solution of the problem, as how best to meet the foe in the face and stop its onward march; experiences and observations of Special Commissions have been called upon to solve the nature of the disease and its probable source of origin. But after all, the phenomena of nature have remained a "mystery," up to the present day and a sealed book to the eyes of mortals. The fell disease has mocked every human effort and absorbed in its powerful grasp day by day and inch by inch every blessed spot which once used to be held as the sanitarium of Bengal.

To trace the course of this disease will be a very interesting task. Some 50 years ago in 1824 it made its appearance in Jessore and then stepped into Nuddea in 1856. The depopulation it caused at Oola first created alarm and drew public notice. Four years after, it extended itself into the district of Hooghly and encroached upon Kanchrapara. Here it raged vehemently and spread into Halishahar, Tribeni, Culna and Guptipara in succession. Whilst it was making onward progress to the west, both the banks of the Hooghly became affected, and the villages on either side of it up and down simultaneously presented one melancholy scene. From Tribeni it passed into Mugra, and thence to Panduah in 1862. Here it divided itself into two courses. The one following a steady north-westerly route along the railway line to Mamari, reached Burdwan in 1869. The other branched off to Dwarbasini south-west and reached Parambo and Shabazar where it committed dreadful havocs. Overleaping an extent of territory not less than 20 miles in area, it broke out next year at Coomurgunge, followed by an outbreak at Jehanabad. The year following 1864 from Parumbo and Shabazar it proceeded northwest by the eastern bank of the

Damudar in a straight line to Jamalpore and Selimabad, where it appeared in 1869. Thence it spread in a northerly direction and met the first course at Mamary. Thus the whole district became one continuous scene of disease, and for some time the fever hovered round the eastern bank till in 2 years more it crossed over to Sreekristopore and Jotseram.

Now from Jehanabad, as from a common centre, it spread northwards to Chandoor, Bulchand, Akloky—westwards to Goghat, Kamarpookur as far as Kotulpore, eastwards to Myapore, Krishennagore, and southwards to Bally and Hajeepore. The northern course spread into the villages higher up till it was joined by the southward extension of the disease from Burdwan. In the district of Burdwan itself its outbreak was simultaneous and no history of priority or lateness can be made out from the statement of the villagers. It has since spread to Boodbood, Munglecote, Cutwa, and latterly has shown itself in its worst form in some of the villages of Beerbhoom and Midnapoor. It will assist us much in our future inquiry to trace once for all the physical geography of the Delta of the Ganges and the topography of Lower Bengal with reference to its rivers and canals. The whole of Lower Bengal is situated on the Delta of the Ganges, which consists of numerous streams and branches that cut up the land in a network. Here empty also the Padma, the Brahmaputra, the Damudar, the Rupnarayan, &c., after a long winding course, washing several tracts of country of which they are virtually the drainage channels. In the rainy season some of them bring down volumes of water in which a large quantity of earthy matter is suspended. It is said that a glass of water taken out at this time of the year contains about one part of mud in four. The violence of the tropical rains and the fineness of the alluvial particles in Bengal cause the waters of the Ganges to be charged with foreign matter to an extent wholly unequalled by any large European river during the greatest floods. The Ganges frequently sweeps down large islands, and Colebrooke relates examples of the rapid filling up of some branches of the river and the excavation of new channels where the number of square miles of soil removed in short time is astonishing, the column of earth being 114ft high. Forty miles are mentioned as having been carried away in one district in the course of a few years. If we compare the proportion of mud, as given by Rennel with his computation of the quantity of water discharged, very striking results are obtained.

'If it were true that the Ganges in the flood season contained one part in four of mud, we should then be obliged to suppose that there passes down every four days a quantity of mud equal in volume to the water which is discharged in the course of 24 hours. If the mud be assumed to be equal to one half of the sp. gr. of granite, the weight of matter daily carried down in the flood seasons would be equal to 71 times the weight of the great pyramid of Egypt.'

The swelling of the rivers in the rainy seasons and the overflowing of their banks form a characteristic feature of the rivers in Bengal. On account of this inundation the countries immediately bordering the banks are elevated more and more with deposit of alluvial sediment and are on a considerably higher level than the inland plains for some distance. This slope from the river to the plains should be borne in mind in connection with the question of drainage of the villages. The width of the rivers increases in proportion to their proximity to the ocean. A small rivulet expands into a wide stream as it rolls on to empty its water into the neighbouring sea. In proportion to its expansion, the rapidity of its current gets lessened and the deposit of fragments of stone and mud at its mouth is the result. Thus great changes take place in the Delta of a river by the prolongation of land and encroachment upon the sea by the formation of sand banks, by the filling up and silting up of its bed, by evacuation of the bed of the river from one portion, and the opening out of a new channel in the other. These changes are more prone to occur in the mouths of the streams that are fed mostly by the surface washings of the villages in the rainy season and not by the melting of the snow. Although most of these rivers get dried and their beds silted up after the subsidence of rain, yet at the ensuing season they are opened out afresh by the force of the current, and afford equal facility to the drainage outlet. Yet circumstances might so happen as to offer material impediment to the discharge of its water by the narrowing of its mouth caused by the setting of the deposit.

The effect of the inundation is partly advantageons and partly injurious to the soil. When this water does not stand long in the plains but is swiftly carried away by the khals which are the feeders of the larger streams, it adds to the fertility of the land by deposits of silt. Besides, it flushes the land and is a great purifying agency. It replenishes the tanks and carries away the aquatic vegetation. But when it is allowed to stagnate long, it turns the plains into a marshy unproductive soil, which change is still more characteristic if the water of inundation holds suspended in it a large quantity of sand. This stagnation of water impregnates the soil with moisture and favours excessive growth of vegetation.

The soil of Bengal consists mostly of a mixture of sand and clay in different proportions. The superficial stratum contains a preponderance of silica which in some places forms the entire bulk. The stratum deeper down consists of tenacious clay of different degrees of depth which is very glutinous and retentive of moisture. The water percolates through this very tardily unless the clay is mixed with a large quantity of sand which allows filtration through its interstices. Still further down the sandy permeable layer is met with. In digging a well, the shaft must be sunk to a depth of 15 ft. before any water can be obtained. Sometimes it is reached more superficially and at other times after a good depth is dug into. The clay consisting of salts of potash, lime, alum, silica and organic matter is peculiarly favourable to vegetable growth. As I have mentioned above, water percolates through this soil very slowly and it can be well understood that, with a heavy rainfall in Bengal if there exists any impediment to the superficial drainage, the water will slowly sink in and impregnate the soil with dampness. The greater the depth of this stratum of clay the more effective will the impediment prove itself.

The towns and villages in Bengal are generally built on an elevated piece of ground which slopes towards the fields. They consist of an aggregation of huts with narrow lanes and by-lanes. The mud, for the construction of huts, is generally dug out of a portion of land facing the intended dwelling. The economical idea of a Hindoo generally prompts him to leave the pit thus formed unfilled up, which the surface washings of the rainy season convert into a water reservoir used for all household purposes. Here are washed and emptied all the refuse of the house, here is formed a convenient tank for the bathing of the zenana, and from this polluted source, water for cooking, if not for drinking, is in most cases supplied. This tank serves the purpose of drainage reservoir of the neighbourhood and draws into it surface washings of the rainy season. It is seldom that its proprietor invests money to clear its bottom which in time becomes filled up with a stinking mud. The water of it becomes so obnoxious as to become unfit for animal life. The setting of the layer of mud materially obstructs the flow of subsoil water.

Beside these tanks which form the standing drainage reservoirs, there are running streams or khals which carry away the surplus water to the neighbouring fields or rivers. These khals are numerous and correspond one with each village, some are even navigable at one end and pass by the name of Nuddee as the Kana Nudee, Sarswati khal, &c. Were it not for their agency, the places, far removed from the river bank, would have been uninhabitable and unproductive from the extent of water that would have deluged their surfaces. The khals sometimes lead into a low lying tract where, in the absence of an outlet, the ground remains under water for 12 months in the year.

Those Jullas, as they are called, are not numerous and generally they have some sort of communication with a neighbouring stream. But it is not the inland places alone that require the agency of the khals for their drainage. For owing to the condition previousl ymentioned, viz., the height of the villages being greater towards the river and their slope away from it, these also do not dis charge their water into the river direct, but the water will have to be carried into it through the same intermediate channels. It will thus be seen how useful these natural drainage operations are for the integrity of the villages; for any interference with them will seriously upset the balance of health of the villages of which they are the drainage outlets.

I have already expressed that the villages stand higher than the surrounding fields which separate one from the other. The extent of the fields is three or four times greater than the superficial area of the villages. In process of time every bit of that land has been brought under rice cultivation, so that the rice fields present an uninterrupted sight for miles around in the harvest season. It is the peculiar nature of the crop that the fields should remain at least one foot under water before a good out-turn can be expected. This water is prevented from flowing out by *als* or bunds that bound the field of every individual peasant. Assuming eighty inches as the amount of rainfall in one season, more than one seventh of it has no outlet and is allowed to saturate the ground.

This shallow sheet of water, spread over miles and miles, must necessarily affect the hygrometric state of the atmosphere and cause subsoil dampness. Besides, the decomposition of the stumps of rice-stalk, left after reaping the harvest, ought to be a fruitful cause of unhealthiness. Accordingly we observe Bengal enjoying the unenviable notoriety of being the hot-bed of fever which is ever endemic and rages with peculiar violence in that season of the year when the subsidence of water from the face of the earth affords greater facility to decomposition.

After all these preliminary remarks, we will be in a better position to judge for ourselves the causes that have been in operation to bring about the present state of unhealthiness. The public are too much given to the train of thought that the cause of malaria must be a new agency, or at least one, that was not at all in operation previous to the present outbreak, as if all causes are followed immediately by their respective results. They discard any view or theory if it turns out that the cause it assumes has been in existence for some time past. Thus if one tries to show that the soil is badly drained, the sceptic is ready with his argument that the same drainage operations had existed from his date of recollection. Again, if one points out that the ponds and the rice fields are injurious, he will be equally disbelieved since it would be urged, they are of no less than fifty years' standing. Thus inquirers are led to unravel the mystery in the unknown phenomena of the celestial world, or seek the aid of electricity in the solution of all difficult problems. We forget that there is in nature pervading all her phenomena the principle of toleration. An act might pass as innocuous as long as it is within this limited bound, but directly that limit is over-reached than a manifestation of disagreeable symptoms shows the reluctance on her part to pass the affair without notice. A glutton may indulge himself in his pleasant repasts for years and years without coming to grief till at last a stage will be arrived at when the digestion will become impaired and an obstinate diarrhœa will bring his blissful existence to an end. A drunkard may have his dram with impunity, but the cumulative effect of it will show itself subsequently in a sudden attack of delirium tremens. Instances like these might be multiplied to show that we need not rack our brains to find out an unknown agency for the explanation of the fever, but bearing in mind that line of argument, it will be easy to fix on some out of hundred and one causes that have stamped Bengal as a habitat of Malarious fever. And, in fact, it is the Endemic disease which has now assumed the virulence and spreading character of an epide[illegible] The [illegible] of this epidemicity we will discuss afterwards when we have done with the mention of those that primarily engrafted the disease on the land. Under these are included the seasonal peculiarities, as temperature and variations of hygrometry, want of sanitary arrangements in Bengal villages, dampness of soil, over crowded poverty. Other causes are assumed to explain the spread of it, as contagion and epidemic influence. Dr. Saunders attributes the generation of fever chiefly and solely to seasonal influence. The land in Bengal is partly submerged during the rainy season, and there is excessive wetness of the soil everywhere: but the sky during the monsoon months continues to be overcast, the necessary consequence of which is that very slight evaporation from the surface takes place, the diurnal variations in the temperature being unimportant. But when the sky clears in the month of September, or, in some seasons, in October, and the land has been more or less drained of the surplusage of water in the rice plains of Bengal, then very rapid evaporation goes on from the surface, the atmosphere becomes surcharged with moisture, and, with the advanced season of the year, the daily range in the Thermometer advances to 18, 20 and 25 degrees. It is the continuance of these conditions which excites a feeble state and which prostrates large masses of the community with disease in this season of the year. Most of these poor creatures have to labor in the open air and are exposed to a temperature of 140° in the sun's rays during the working hours of the day, the early morning temperature being as low as 60°.

These variations of temperature and variations in the hygrometric condition of the air, act upon the impoverished half-clad and under-fed inhabitants and prove trying to their constitutions.

In support of his argument Dr. Saunders gives the degrees of variation of temperature and moisture in different months of the year, the sum and substance of which may be taken to be the following:—

The variation of temperature in June is 8.1, in July 5.6, in Agust 6, in September 5.4, in October 8.6, in November 14.7, in December 16. 3, in January and February 16.9, in March 16.5, in April 15.2, in May 12. 9.

Range of moisture in June .2, in July .14, in August .15, in September .17, in October .35, in November .3, in December .32, in January .32, in February .37, in March .4, in April .36, in May .3.

Hence it will be seen that the range of temperature is progressively on the increase from October till the maximum is reached in February when it again begins to decline. The hygrometric condition also varies and the range is greater from October till March when the variation reaches its height. Both these conditions therefore are most marked and must exert their baneful influence with greater certainty in the month of February when the range of temperature is great and the quantity of moisture existing in the air is very variable at different times of the day. But is this in harmony with the actual condition of health of the people? The January and February months in Bengal, prior to the appearance of the Epidemic, have always shown less of fever cases and, even in this unhealthy time, improvement begins to manifest itself directly the month of Feburary is reached. October and November have been the most unhealthy months with reference to fever when, according to the Hindoo proverb, the eight portals of death are open to receive the departed mortals. Yet according to the table above given, these months do not occupy the foremost place. Dr. Saunders places some stress on the fact that these high ranges must be associated with actual intense cold and not with continuous warmth.

Even then January ought to be the fever-month instead of October, which last in Bengal is scarcely reckoned amongst the winter months. Bengal villages are noted for want of sanitation and cleanliness, and the habits of the people tend to make them more filthy and fruitful hotbeds of disease. The arrangement of the huts in one block prevents ventilation and purification of air. Besides, the rooms are low and are not provided with sufficient number of windows for perflation of air. The floors are damp and perhaps an only mat forms all the necessary furniture of a peasant's cottage. Close to his door are tied the bullocks, the companions of his toil, whose excreta are allowed to collect in heaps and rot for the whole year to supply him with manure for his next harvest. Careless and indifferent, he does not mind about cleanliness, and the whole surrounding area is allowed to remain fallow and gets overgrown with rank vegetation. Cesspools, pits and marshes exist at every step, and nobody thinks it his business either to fill them up or cut out a drain for outlet. His poverty does not allow him to clothe himself sufficiently, and thus scantily clad he is exposed to all variations of temperature; he is engaged the whole day in his fields from the beginning of the rainy season to the end of winter, ploughing, sowing, mowing, reaping, thrashing, &c., and working for hours and hours whilst wading ankle-deep in mud. His diet is meagre and not sufficiently nutritious, and sometimes he is content to have a single meal a day.

The dead are buried next door, or, if they are burnt, cremation takes place by the side of a stream or pond. No place is considered more suited for easing oneself than the bank of a river or the side of a tank from which perhaps the village draws its whole water supply. When all these conditions, with a number of other minor ones, are placed before the reader, should he wonder to be told that disease has broken out in the locality and is carrying away numbers of victims! Why, sanitary science will be a mockery if better health and lower mortality could have been compatible with such deplorable condition that I have described. But when on the other side of the scale we place the villages, that are exempt from this pestilence, though they enjoy equal advantage as regards sanitary measures, our belief on this as the *originator* of the disaster becomes much shaken. It can hardly be denied that the greatest mortality has been in the most populous villages, where there has been a greater accumulation of filth and dirt, and those have been more slow to recover where jungles, bamboo topes, cesspits and tanks abound. The part, which want of sanitation has played in the Epidemic, has therefore greater reference to the predisposition and aggravation of the disease than to its immediate causation.

Out of these headings of general insanitation two have been more signalised than the rest, viz., jungles and bad water. When the fever first showed itself in the district of Hooghly, the exuberance of vegetation was pointedly marked out as the chief cause of unhealthiness. With eager desire to nip the growing evil in the bud a wholesale order was given to free the villages of vegetation. The mania was carried to such an extreme that mangoe topes and other fruit trees were cut down much to the distress and loss of the owners. It is not large trees, but the perennial shrubs which die every year and rot and decompose on the ground, that are objectionable. The existence of excessive jungles undoubtedly gives rise to a peculiar smell which can be perceived directly on entering a jungly village from an open field.

The bamboo sheds so much leaves that a cluster of them will 'carpet' the ground thick to some distance around. It is argued that jungles and fever have not proved themselves commensurate, and on the other hand, that jungle-free villages have suffered as much as the rest. My general experience does not tally with the opinion herein expressed, as, with a very few exceptions, I can safely assert that both bear some degree of relationship. Of course I do not include under jungles any thick plantation of large trees, but only rank growth of wild shrubs and bush wood. Jungles are the indication of a moist condition of the soil, with which they bear a certain relation. Excessive jungle implies supersaturation of the soil with moisture which, as we will presently observe, is itself a fruitful cause of disease. Villages bordering the river side are more jungly as a rule, than those far removed to the interior. In some dry rocky soils of the N. W. and Central Provinces scarcely a shrub grows, and in those localities enlarged spleen is a medical curiosity. The places on the right bank of the Damudar, as Shadeepore, Joteseeram, Sreekistopore, are very jungly and the virulence of the fever was proportionate, whilst others, on the same side and more inland with less jungles, as Sankta, Dhamuaree, Soobuldah, Oochalun, Kytee, Chuk Chundu, suffered less. Some have specified particular classes of jungle as more objectionable, but, with the restriction I have given above, I am not partial to any variety. The growth of Belatee Bharenda is by some looked upon as very significant, but if this plant has grown more abundantly of late than any other, it is simply because it is more tenacious of vitality.

The belief is common that bad water is the source of local unhealthiness and some go the length of asserting that Malaria is due to an impure supply of it. Whether there is any particular ingredient in the water which is productive of malaria I am not aware of; nor would I give it more credit than that by deteriorating the general standard of health, it paves the way for all endemic or epidemic diseases. One broad fact militates strongly against this theory. The places where malaria first showed itself are those bordering the river side, and the progress of the disease in the Jehanabad circle will show that it spread inland from the banks of the Damudar and the Darkessur. Now these are the very places that for 8 months in the year enjoy the benefit of pure wholesome river water. The villages on the Hooghly as Kanchrapara, Halishahar, Tribeni, Cuptipara are all on the banks of the river. The water here is as pure as that of Barrackpore, which we take for our standard for the sake of convenience, and yet they fared worst in the visitation of the epidemic. It is but fair to mention that those villages which I will presently point out as having suffered least are those that enjoyed, along with other advantages, a good water supply. Dr. Smith believes that 'where there is an ample and pure supply of water there is as a rule comparatively little fever.' But he adds 'instances of exceptional character where people drink good tank water yet great mortality has occurred. On the other hand at Polashee on the Koontee the people, having no tanks near them, drink the water of the old half-dried-up river, a source by no means inviting, and yet it is a fact that the place does not seem ever to have been particularly unhealthy, and that mortality of late years has undoubtedly been low.' The bunding up of the mouths of some rivers and canals has undoubtedly deteriorated the water supply of the district through which they passed. For according to the Hindu idea of looking upon every running stream as pure and holy, the water supply is chiefly drawn from such sources, and the integrity of tanks in those villages is consequently never preserved. The sudden cutting off of that supply will sooner or later show itself on the already depraved health of the inhabitants. This is just the condition of the villages through which the Kana Nudee used to flow, the closing of which, opposite Selimabad, has given rise to loud outcries on the part of the villagers who justly attribute their sickly state of health to that injudicious step of the Government. One who has personally witnessed the bed of the Kana Nudee from Haralla for some miles down, will fully sympathise with them in this change. In places where crystal water was once procurable, shallow pools have been left overgrown with decaying vegetation and teeming with animalcules.* The other evil effects of bunds thrown across water-outlets will be dwelt upon under the heading of the next causation.

Medical opinion has been almost unanimous in attributing the present unhealthy state of the country to dampness of soil and increased subsoil moisture. The evidence on this point, however, is purely an inferential one, for it must be borne in mind that when we speak of increased moisture, we have no previous data wherewith to make any comparison. No one knows what the subsoil water level of those districts was previous to the outbreak of the fever; but we base our conclusions on the following facts :—

1st That the fever is not persistent but varies in its severity with the change of season, beginning when the rainy season sets in, reaching its climax when the ground is thoroughly saturated, and gradually abating and remaining in abeyance when the powerful summer sun dries up the ground to cracks and fissures.

2nd It is more severe in the year attended with unusual rainfall.

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* We are glad to notice that since the above was written, Government have undertaken to commence operations at the point the Kana Nuddee took its departure from the Damudar, with a view to open out its channel.

marshes, and such also is the history of improvement of Algeria, as is testified by the Report of the Royal Commission of 1870. Such is also the case with the Port Canning Reclamation land which, at its first occupation, was found nearly uninhabitable, whilst a few years of sanitary work have built a town, where formerly tigers and wild beasts prowled and roamed with undisturbed felicity. We have in Bengal marshes which go by the name of jullas, and the saucer-shaped depression existing between Hooghly and Burdwan cannot but have a prejudicial influence.

The area of these natural marshes is utterly insignificant compared to the area that has been virtually turned into a marsh by the extensive cultivation of rice in lower Bengal. The increasing population must have caused an increasing demand of their staple article of food, which was still more in requisition from the increased export of grain which has received unprecedented encouragement of late. This has led every peasant to engage himself in its production as the sure means of profit, every bit of marginal land that formerly remained fallow has now been brought under the plough. So much has rice cultivation increased that even in the hearts of villages patches of land have not been spared to yield a crop. Hence we have moisture and vegetable decomposition going on to an extent which has no parallel in any other country. The proximity of rice fields is always considered unhealthy on that account, and a province with extensive rice cultivation is much below par in its standard of health. Barcelona and other places in the West Indies were so malarious during the harvest season that the people had to desert the neighbourhood for six months to escape its deadly influence. Orders were passed forbidding any cultivation of rice for some distance from the confines of habitation. Jessore, Burrisal Backergunge and other places in eastern Bengal enjoyed the unenviable notoriety of being at all times the habitat of fever whilst the Hooghly and Burdwan districts were in the height of their blissful state of healthiness. Those are the very districts that have at all times supplied Bengal and other countries with their produce of rice, and how far the one was the effect of the other, further observations would corroborate. But the following facts should be entered against it to account to some extent for the mischief with which it has to be accredited. 1st That with the increase of rice cultivation in the districts of Hooghly and Burdwan the fever has made its appearance. 2nd That the fever continues as long as the fields are under water from September to January, and begins to abate just after the harvest is reaped and the fields dry up. Rice cultivation per se is not objectionable but on account of moisture and vegetable decomposition that are necessary attendants on such conditions. It has been objected to by some on the ground that other places have suffered that have no contiguous rice fields, as if rice fields alone were obnoxious to health. Those, who advance such objections, evidently forget that the cultivation of rice necessitates a certain violation of sanitary principles which could be also brought about by a hundred other agencies. That rice-cultivation is one of the very powerful means of rendering the soil humid can be satisfactorily made out by inspection of the country in the fever season, when it will be found that though the villages are dry, and its water drained off, there is stagnation in every field, the extent of whose surface in sq. miles is, at the lowest estimate, three times as great as that of the former.

I have mentioned before that a great part of the drainage water passes into the tanks and the rest flows out into the fields and thence into the khals by which channels it is ultimately disposed of. All these standing drainage reservoirs are defective and insufficient. Defective, because, being stationary and not having any outlet, they must necessarily impregnate the surrounding country with subsoil moisture. A running drain is undoubtedly preferable to a stagnant one, and is more effective in its operation. The only running drain that carries the rain water is the Khal that skirts along the border of the village. Its breadth and depth are in most cases quite insufficient for the volume of water that has to be removed. Besides, the obstruction, the water meets with in passing out of every field, is too great a hinderance. Supposing the Khals had been deep and broad enough for drainage purposes and their channels, down to their ultimate destination patent throughout without any obstruction or silting up of river, would the drainage of fields and villages, I ask, be perfect? Would not the bunding of the individual fields keep in the water and prevent its flowing out? I have witnessed the ponding of water in patches of fields very close to the water out-let, and I am at a loss to find out any means for obviating this evil, unless a thorough system of irrigation is introduced, making it unnecessary for the peasant to retain water in his field for the supply of the whole season. These preventive measures will be dwelt upon hereafter.

(To be Continued.)

REVIEW.

A Manual of Fever for the Use of Students and Practitioners. By Hurro Nath Roy, Graduate of the Medical College of Bengal. Wyman & Co. Calcutta. 1873. (All Rights reserved.)

If not for the satisfaction of our readers, at least, in justification of ourselves, and for the sake of "students preparing for examination and the busy practitioners," to supply whose want the author has laboured in the fulness of charity, have we deemed it necessary to substantiate the very serious charges we brought forward against this *Manual.* We charged it with meagreness, plagiarism, and inaccuracy; and we think it enough to state, in order to justify the first charge, that the *Manual* consists of only 90 pages octavo, including blank ones and appendix, in whose compass the author has treated of the whole class of diseases which pass by the generic name of Fever, and which, according to the author himself, numbers no less than *fifteen* separate diseases.

In substantiation of the second charge, plagiarism, we give the following instances taken at random. The fact is, the portion treating of the Eruptive Fevers is taken almost *verbatim* from Tanner's *Practice of Medicine,* and the rest of the book with slight modifications from the same and from Aitken's *Science and Practice of Medicine,* and what is worst of all, internal evidences show that the Edition of Aitken used for this laudable purpose is an old one, the errors of which are, as a matter of course, copied,—errors which Aitken himself has corrected in subsequent editions.

Relapsing Fever.

Babu H. N. Roy's *Manual.*	Dr. Tanner's *Practice, 6th* Ed.
This is also known as *recurrent fever*, and is so called, *owing to the fact that at a certain period of the convalescence there is a relapse of all the symptoms.* It generally ushers in with the usual symptoms of continued fever, and *on or about the fifth or seventh day, a profuse perspiration breaks out over the whole body, the fever disappears, and the patient is almost left free from the disease, though weak.* The convalescent *interval* which *follows is short;* for, again *on the seventh day after the critical sweating, there is a relapse and repetition of all the symptoms. The return to perfect health is delayed* in cases of old and infirm patients. *The disease is seldom fatal.*	The names of relapsing, famine, or *recurrent fever*, have been bestowed upon this infectious disease, *owing to the fact that at a certain period of the convalescence there is a relapse* of *all the symptoms.* * * *on or about the fifth or seventh day, a profuse perspiration breaks out over the whole body, the fever disappears,* * *, *and the patient is left free from the disease, though weak.* The apyretic *interval*, however, *is short;* for about the fourteenth day from the commencement of the disorder, or *the seventh from the critical sweating there is an abrupt relapse with* a *repetition of all the symytoms.* * * *the return to perfect health is somewhat slow,* especially in the aged and such as were previously in a bad condition. * * *The disease is seldom fatal.*

Small-Pox.

Babu H. N. Roy's *Manual.*	Dr. Tanner's *Practice,* 6*th* Ed.
The fever is of a continued type and is ushered in with the usual symptoms, namely,—*headache, vomiting, lassitude, and muscular pains in the back. These symptoms are succeeded on the third day by an eruption of red pimples, which inflame and suppurate in the course of a week.* The eruptions first appear *on the face, and wrists; secondly on the trunk; and lastly on the extremities. When the vomiting and pain in the back are violent,* the disease is severe.	The disease commences with shivering, fever, *headache, vomiting, and* well marked *muscular pains in the back. These symptoms are succeeded at the* end of forty-eight hours, or the beginning of the *third day, by an eruption of small, red pimples; which in the course of a week inflame and suppurate* and begin to scab. * * *When the vomiting and pain of the back are violent* they are generally the precursor of a *severe* form of the disease. It (the eruption) appears in the following order—*first, on the face, the neck and wrists; secondly, on the trunk; and lastly, on the lower extremities.*

Scarlet Fever.

SEQUELÆ.—The victims of scarlet fever are generally unhealthy, and *liable to many forms of scrofula, especially ophthalmia, strumous ulcers, scrofulous enlargements of the cervical glands, diseases of the scalp,* &c. *They also suffer from acute rheumatism and rheumatic pericarditis;* occasionally *a muco-purulent discharge is seen to take place from the nares, mouth, and fauces, and in female children and women, an acrid secretion, similar in character, has been found to flow from the vagina. Anasarca,* with dropsy, is one of the *most frequent and the most serious sequel of scarlatina. The patient exposes himself to cold during the periods of desquamation, and the escape of the fever poison through the pores of the skin is thereby checked, and is directed to the kidneys in larger quantities than they can bear, thus giving rise to acute* desquamative nephritis.	*Sequelæ.*—Children who have suffered from scarlet fever are very liable to have their health permanently affected, and to become afflicted with some of the *many forms of scrofula; especially strumous ulcers, ophthalmia, scrofulous enlargements of the cervical glands,* abscesses in the ears, *diseases of the scalp,* &c. *They also* seem predisposed to *suffer,* either during the attack or shortly afterwards, *from acute rheumatism and rheumatic pericarditis.* * * Not unfrequently after the decline of the eruptive stage, *a muco-purulent discharge takes place from the nares, and fauces,* while in a few instances *an acrid secretion, similar in character, has flowed from the vagina in female children and women.* * * Another very *serious sequel,* and one which is more *frequent* than synovitis, is *anasarca.* * * *The patient gets exposed to cold, and immediately the escape of the fever-poison through the pores of the skin is checked, which,* as a consequence *is directed to the kidneys in larger quantities than they can bear, giving rise to acute* Bright's disease.

The Blood in Fever.

Babu H. N. Roy's *Manual.*	Aitken's *Science and Practice.*
The leading points in the chemistry of the blood in fever are—(1) A diminution of the alkaline salts. (2) A diminution in the number of the red corpuscles of the blood. (3) A diminution of alkalinity in the serum. (4) Diminution of the albumen after the fever has lasted for some time, with a commensurate increase in the water of the serum. (5). In certain specific fevers, the presence of *uric acid* has been detected.	The most trustworthy and interesting facts connected with the chemistry of the blood are,—(1.) A diminution of the alkaline salts, as shown by Becquerel and Rodier in inflammation ; (2) A diminution of alkalinity of the serum, as shown by Cohen ; (3.) The diminution of albumen after the fever has lasted for some time, with a commensurate increase in the water of the serum ; (4.) A diminution in the numbers of the red corpuscles of the blood ; (5.) In certain specific fevers the presence of *uric acid* has been detected, for instance, in the fever of rheumatism, by Dr. Garrod.

We have not italicized the paralled passages, in this last instance, as we are tired of doing so, and, in fact, there is hardly necessity to do so, when the parallelism is so perfect. The reader will judge for himself how much has the author crippled "the facts which have become the common property of the profession" by the omissions to which he had recourse evidently for the purpose of making them his own, or for what purpose best known to himself.

In justice to our author, however, we must say, that he is not always altogether ungrateful to the authorities from which he borrows. For sometimes, while copying, as usual, wholesale, he puts a portion under quotation, though of course he quietly passes off the remainder as his own. Thus in the *Appendix* under "The Urine in Fever," he copies *verbatim et literatim,* all that Aitken has written about the subject, but very generously acknowledges about half, and takes credit for the other half only.

As a glaring instance of the way in which the author contradicts himself, we beg the reader to compare his contrast between Remittent and Typhoid Fevers, and his description of the low form of Remittent Fever. In contrasting Remittent with Typhoid Fever he says,—"Diarrhœa, espistaxis, hebetude of expression, stupor, tympanitis, and rose-colored spots, are *never* seen in remittent."—"These symptoms are very common in typhoid." "It (remittent fever) is *never* attended with hæmorrhage from the bowels."—"Hæmorrhage from the bowels is very common in the advanced stages of typhoid." In describing the low form of remittent fever . he says ;—"It presents two varieties, both proceeding from low vitality, and from depraved state of the blood. In the one variety, in addition to the febrile symptoms, there is from the commencement of the attack *stupor* and nervous depression ; *flatulent distension* of the abdomen ; a dark and dry tongue covered with sordes ; gums covered with sordes ; pulse either frequent or slow, slender or full, regular or irregular, but always feeble and readily compressible, and some times almost fluttering ; *dark alvine evacuations* becoming involuntary in the end ; hæmorrhage from the gums, and discharge of *dark blood from the bowels* ; eruptions on the body."

The following is another instance of inconsistency and gross inaccuracy. Under Typhus Fever, the description of which, by the bye, has, for the rampant confusion throughout, its parallel only in the delirium of the disease itself,—under this head we read,—"Typhus is eminently contagious, and proceeds from the same causes as the typhoid fever, *but* it is generally an accompaniment of over-crowded and ill-ventilated dwellings." Under Typhoid Fever we read,—"CAUSES.—Over-crowding, with insufficient or unwholesome food, and a confined and vitiated air. The disease is *also* produced by human effluvia or excretions in a state of decomposition." In the first statement the particle *but* introduces such hopeless confusion that it is impossible to make out what the author means. The meaning may be either that over-crowded and ill-ventilated dwellings are distinct from the common causes which produce typhus and typhoid fevers, or that of all the causes that produce both typhus pnd typhoid, they are those which are chiefly concerned in giving rise to typhus. This much would appear, however, from the context that the first place is not given to over-crowded and ill-ventilated dwellings in the causation of typhoid. But in the second statement the author is explicit and gives the first place to the self-same causes. If there was any doubt, it is removed by the particle *also* which reduces into secondary importance "human effluvia or excretions in a state of decomposition," as causes of typhoid fever. Now what is the fact? The very opposite of what the author states. Indeed, nothing is a better established fact than that, as Murchison says,—"the prevalence of pythogenic (typhoid) fever is *independent* of over-crowding and deficient ventilation," or as Tanner says, "in as much as it (typhoid fever) is *not dependent* on over-crowding, so the rich and poor suffer equally from it." To teach, therefore, that typhus proceeds from the same causes as typhoid, and that typhoid arises from over-crowding, is to teach a long-exploded error, and to display one's profound ignorance of "facts which have become the common property of the profession."

Under Dengue, which has been very recently with us for nearly a full year, upon which so much has been written by learned and competent authorities, and about which, if not original observation, at least correct information, was expected from a volunteer teacher of students and a volunteer guide of the busy practitioner, Babu H. N. Roy writes:—"According to Dr. James Mellis, the disease prevailed at Calcutta in 1842, but it first showed itself in an epidemic form in Calcutta in 1824." Before reading the second part of this sentence we thought the evident mistake in the date was typographical, but the second part leaves no doubt of the authorship of the mistake. Dr. James Mellis is one of the authorities from whom we learn of the epidemic of 1824, an epidemic which bore the closest resemblance to the recent epidemic of Dengue. So far as our information goes, there does not appear to have prevailed in Calcutta a similar epidemic in 1842, at least no body has written anything about it, and certainly not Dr. James Mellis. We write, however, under correction, and we shall be obliged to our author, if he can produce evidence to the contrary.

Under Remittent Fever confusion reigns supreme. The author makes two divisions of this fever, (a.) Simple Remittent Fever, and (b.) Yellow Fever. One is apt to suppose, on looking at this division, that the Yellow Fever, thus brought under the category of Remittent Fever, must be the disease known as the Malarious Yellow Fever, and not the true or Specific Yellow Fever, but one is disabused of this delusion when further on he reads the description of the disease. The description is by no means clear, as none of his descriptions are, but still it is patent even from that chaos that the author has an eye upon the specific, and not the malarious fever, or, more properly speaking, has made his hodge-podge from Tanner and Aitken's descriptions of the true disease, without minding the distinction they both have drawn between the two diseases. No-where does he even allude to one of its most essential features, contagiousness. He confounds its pathology with its etiology, when he says,—"the disease is *due* to an acute, fatty degeneration of the liver." He takes three out of the five forms under which Aitken describes it, but from his description of the *Algid form* it is impossible to make out whether he is in reality describing the *Algid*, or the *Hæmorrhagic*, or the *Purpuric* form. For, according to him, in the algid form, "hæmorrhages from the nose, mouth, stomach, and other parts, *generally form a characteristic feature;*" only *sometimes* hæmorrhage is altogether absent." Again, in the same form, "the apearance of *purduric spots* on the body is a *pathognomonic* sign." What then is the distinction between the algid, and the other two forms? The author evidently forgets that the algid form is so rapid that there is no time for the hæmorrhages to take place, or for the development of the purpuric spots, the patients being overtaken as it were in a "hurricane." Although he sets out with saying that like remittent fever, yellow fever presents itself under three distinct forms, we do not find him describing remittent fever under those forms.

What has struck us as most singular is that in none of the fevers which has been treated of in this *Manual* has the author offered any observation of his own. We had expected something new in the shape of original observation, if not of original research, in at least those fevers which are endemic in this country, and which have been raging with epidemic virulence for so long a time that the chief features of interest and peculiarity presented by them have not escaped the untaught eyes of even laymen. Our author, however, was so determined to be an author, and was so engaged with his scissars, that he had evidently no time to open, or at least use, his eyes, and the epidemic has been going on around him with its fearful devastations without being able to disturb his calmness and serenity. Is any other explanation possible of the strange fact that only six pages (not solid but leaded) have been allotted for the description of symptoms, causes, pathology, treatment, and all, of the Intermittent and Remittent Fevers? When it is laid down, as a fact, without any qualification, for students to bear in mind, that " the three stages (cold, hot, and sweating) succeed each other in the order mentioned," what can we possibly imagine but that the author could never have had any experience of the disease in question? It is true that in typical cases that is the order in which the stages succeed each other, but what of the endless variations? What of the cases in which one or even two of the stages are wanting, of the cases in which the order is reversed, of the cases in which the stages or rather states alternate, or even co-exist?

In the review of a scientific work the reviewer should direct his attention more to the facts than to the language of the work, to the matter rather to the manner. With us an additional reason, why as a rule we purposely avoid criticizing the language whenever it happens to be the English, is our own incompetency for the task. But in the present instance we have been compelled to break through the rule, and pass the limits of modesty which we had prescribed for ourselves, the outrages against language committed by our author are so violent. At the very threshold we are met by a sentence which has defied our best efforts to decypher. " It (fever) is *one of the most important class* of diseases." Is fever one disease of *the* most important class of diseases? or does fever form a most important class of diseases by itself, and, therefore, is *one* of the most important class*es* of diseases? Again: " For a period of about one week we are to *wait expectant* by the bedside of the patient, uncertain what counsel to hold, what measures to use, what *prognostics to indulge*." To wait is to remain in expectancy, and to remain expectant is to wait.

What is it to *wait expectant* the author alone can enlighten us about. Perhaps he intended to add force to expectancy by coupling two words of the same meaning. We must thank him for teaching us to *indulge* prognostics. Again : Under Typhus we are told, *Tartar* begins to accumulate on the *gums, lips, tongue, and* teeth." Here evidently the author is ignorant of the meaning of the word *tartar ;* he confounds it with *sordes ;* or perhaps having used the word *sordes* once before, in describing Remittent Fever, he must use another, however inapplicable, in describing the same phenomena in another Fever. Again : Under Scarlatina, "Anasarca, *with dropsy,* is *one* of the most frequent and the most frequent *sequel* of scarlatina." Here, besides the error of grammar, we have a total misunderstanding of the imports of the words *anasarca* and *dropsy*. Is anasarca not dropsy ? True, dropsy is a more general term, and consequently of wider significance, but the author has not used any differentiating epithet to make it bear a different meaning from anasarca. Anasarca is dropsy of the general cellular tissue, and if he meant to include other dropsies, as dropsies of the serous cavities, he should have said so.

We must here conclude, not because we had not anything more to say, but because we have not space at command to say all that we had to say. We cannot conclude, however, without thanking the author for his adopting, as the motto of his book, the motto of our *Journal*, and we sincerely hope he will abide by the catholic principle inculcated by the Hindu sage of yore, and not only thoroughly study the literature of the school to which he belongs, but extend his knowledge beyond its narrow limits, so as to be able to fulfil the duties of "the true physician," and thus ultimately become a safe guide for students and busy practitioners.

Acknowledgements.

The Indian Herbalist. Or the Indigenous Remedies for the Prevailing Diseases of India. By Nobin Chundra Pal. Calcutta. 1873.

Nidana, translated into Bengali. By Udoy Chand Dutt, Civil Medical Officer.

Taking Cold (the Cause of Half our Diseases) : Its Nature, Causes, Prevention and Cure ; its Frequency as a Cause of other Diseases, and the Diseases of which it is the cause, with their Diagnosis and Treatment. By John W. Hayward, M. D., M.R.C.S., L.S.A., &c. London : Henry Turner & Co. 1873.

CLINICAL RECORD.

A Case of (Burdwan) Intermittent Fever complicated with Severe Neuralgia. Recovevy.

REPORTED BY THE PATIENT.

[Babu Bhooban Mohan Chatterjea, L. M. S., late Physician to H. H. the Maha Raja of Burdwan, has sent us the following report of his own case, with the request to publish it in the *Journal.—Ed.*]

During the epidemic years of 1868, 69, 70, 71, I enjoyed very good health, though I had to work very hard in consequence of having the Maha Rajah of Burdwan's Dispensary under my charge. But at the latter end of 1872, having suffered from some chest complaints, my health began to fail; and in April of 1873 I caught the epidemic fever. Having suffered from a triple quotidian type of intermittent fever and neuralgia affecting the right brachial plexus of nerves for 25 days, I was cured on taking a change to Calcutta. On the 15th Sept 1873, on my way to a patient's house 6 miles from Burdwan, I got quite wet (as the palki, in which I was travelling, was leaky) and was obliged to remain in wet clothes for 6 hours that evening. The next day I felt pains all over the body, and on the 17th I got the fever at 4 o'clock in the evening. The fever lasting 6 or 8 hours left me entirely, and I felt myself quite easy on the morning of the 18th. The fever returned however at 2 p. m. that day and lasting two hours left me. At 8 p. m. the fever returned and subsided after a couple of hours at 2 a. m. of the 19th; the fever again returned and remaining on me for 2 or 3 hours left me with copious perspiration. In this way the fever returned at 2 a. m., 2 p. m. and 8 p. m, regularly every day, and each attack lasting 2 or 3 hours left me with copious perspiration.

The attacks were preceded by gnawing pains in the loins and in the calves of the legs. The cold stage was marked by cold hands and feet only, without any chilliness or shivering. The duration of the cold stage was not more than 10 minutes or quarter of an hour. The hot stage used to set in insensibly, the skin becoming warm and dry, the pulse full and frequent, ranging between 96 to 102, pains in loins and limbs, thirst and a great burning sensation in the palms and soles; there was neither headache nor any head symptoms. Bowels ragular, no loss of appetite, urine free and slightly colored. The duration of the hot stage on each occasion was not more than 2 hours. The hot stage was invariably followed by copious perspiration and abatement of the symptoms. There was no organic complication.

From the beginning of the fever I was purged twice with Pil. Rhei Co and Seidlitz powders, and dosed with Quinine varying from 18 to 24 grains during intermission every day. I also took a mixture composed of Acid. Nitro-muriat. dil., Ext. Taraxaci, Tinct. Cinchonæ and Decoct. Cinchonæ every 4 hours for 3 or 4 days. But the medicines did me no good, on the contrary the fever increased both in duration and intensity, and on the 8th day of the fever, that is, on the 25th Sept.

my ideas became confused and I talked incoherently during the height of the fever. The next morning a severe neuralgic pain darting along the right brachial plexus supervened. The pain was most severe in the right shoulder-joint and in the palm of the right hand. At this time I also noticed ulcerations of the gums and of the lower lip and both the breath and saliva became fœtid. The pain was at first supposed to be rheumatic and therefore a mixture composed of Potass. Citrat, Potass. Bicarb, Tinct. Hyosc. and water was given me every 3 hours, and Quinine in 5 grain doses during intermission until I took 20 grains a day. Externally a liniment composed of Lint. Bellad. and Lint. Opii was also ordered to be rubbed on the shoulder. As the medicines had not the desired effect, my friend and medical attendant, Babu Lakshmi Narayan Roy, thought it best to omit the above medicines and to give me Liqr. Arsenical. with Tinct. Hyosc. and water. On the 28th I took 15 minims of Liqr. Arsenicalis, which, instead of relieving my pains or mitigating the fever, increased them both, and in addition brought on a troublesome diarrhœa with pains in the abdomen, particularly severe over the cœcum and right hypochondriac region. I may also state here that at Burdwan Babus Juggobundhoo mittre and Deno Bundho Dutt very kindly attended on me with Babu Lakshmi Narayan Roy. Agreeably to the directions of my friends I came down to Calcutta on the evening of the 29th. A former class-mate and personal friend, I had a very high opinion of the professional abilities of Dr. Mahendra Lal Sircar, under whom I placed myself on the 30th Sept. Dr. Sircar proposed to treat me homœopathically, as I had derived no benefit from massive doses of Quinine or Arsenic. Having become tired of medicines I preferred to depend on nature, and, therefore, I made no objection to his proposal. Homœopathic medicines, I thought, were inert, and to remain under Homœopathic treatment, would be nothing more than to rely on nature. He prescribed *petroleum* 6, to take twice during that day. I took one dose at 1 p. m. Towards evening the fever returned and the pains increased in intensity and extended all over the right chest posteriorly. After evening the pains were so very severe that I could hardly breathe or lie down—in fact I was propped up, and no position gave me the slightest relief. Dr. Sircar was called in at 9 p. m. He gave me *lycopodium* 6, and should it have no effect, ordered me to take Chloral Hydrate with Aqua Dest. One dose of the *lycopodium* relieved my pains a great deal and the 2nd dose, which I took half an hour after, made me fast asleep—towards the latter end of the night the pains returned with the fever and as I had no more *lycopodium* I took the chloral which made me sleep again soundly until 8 o'clock the next morning. From the 1st October till the 5th the *lycopodium* was continued twice daily and both the fever and the pains were decreasing both in intensity and duration. The type of the fever was also changed. It returned once only in the evening and after remaining on me for an hour or so left me with perspiration. On the 6th, however, the full moon day, the fever agin returned with increased severity and lasted 12 hours. The pains too were increased. Dr. Sircar omitted the *lycopodium* and gave me *nux vomica* 6 which did me no good. The fever and the pains returned on the 7th, as on the preceding day, and postrated me much. My friends not finding me well, placed me under the care of Dr.—on the 8th October.

9th. The fever returned yesterday at 3 p. m., pains continued, inability to lie on the right side or on back; bowels costive; abdomen tympanitic and tender on pressure. Dr.—ordered a mixture composed of Ammon. Hydrochlorat., Spt. Ether. Nit., Tinct. Hyosc., Tinct. Calumbæ and Infus. Quassiæ every 2 hours with 5 grains of Quinine until 4 such doses were taken during intermission. In the evening the large doses of the Quinine brought on a general tremor, ringing in the ears, dimness of vision, nausea and complete loss of appetite; the fever returned in the evening and the other symptoms continued. Ordered to take Pil. Rhei Co with Scammony and Hyosc. at bed time.

10th. Bowels moved 5 times; fever left me in the morning; tympanitic state of the bowels less; nausea, loss of appetite and the pains continued.

I was ordered to take a mixture composed of Ammon. Hydrochlorat., Tinct. Ferri Perchlorid, Spt. Ether Nitrosi and Infus. Quassiæ to take every 4 hours and Quinine in 5 gr. doses thrice before fever.

11th. The fever returned twice, once at 3 p. m. leaving me at 9 p. m., and the 2nd time at 2 a. m. leaving me at 6 a. m. The other symptoms continued. Med. Cont.

In the evening the tympanitic state of the bowels was very distressing. The above medicines were omitted. Ordered to take Effervescing draughts composed of Morphia, Acid. Hydrocyanic dil., Acid Citric and Aqua Rosa with Sodæ Bicarb. and Bismuth Subnit.

12th. Slept soundly. The fever returned at 2 p. m. and instead of leaving in the usual manner it continued; all other symptoms continued; flatulence less troublesome.

Omit the above draughts. Ordered to take the following mixture every 3 hours, namely, Potass. Citrat, Acid Citric, Tinct. Aconit. and Aqua Rosa. And to take at once a couple of pills composed of Pil. Rhei Co, Scammony and Ext. Hyosc. Quinine in 5 gr. doses during intermission until 3 such doses were taken.

13th. The fever continued and the pains increased; bowels moved 4 times, great prostration; windy state of the bowels. Dr. Sircar was again called in this day, who ordered me to take no medicine. The fever left me entirely on the 15th; the pains diminished and the flatulence disappeared. For 5 days there was no return of fever. On the 21st, the new moon day, there was a slight return of fever in the evening, which was followed by severe stabbing pains under the right scapula. The pains were agonizing in the extreme. I took 20 grains of Chloral Hydrate which relieved me immediately.

22nd. During the day the pains were not very troublesome, but in the evening the stabbing pains returned with increased intensity and were so very severe that during the fits, both the upper and lower extremities were convulsed; no fever. I took 30 grains of chloral in 2 doses each night which relieved me after 2 or 3 hours.

24th. Dr. Sircar saw me this day. The pains as usual were not very severe during the day. He ordered me to take *causticum* 6, of which I took two doses that day.

25th. The pains did not return last night, slept without chloral; no fever.

From the 26th the fixed pains gradually diminished and left me entirely on the 30th.

On the 31st having had reason to be offended, my anger was raised to such a high pitch that I had very nigh fainted. The result was that the fever returned an hour afterwards. From that day the fever assumed the tertian type and recurred every other day.

Dr. Sircar saw me on the 3rd November and ordered me to take *antim. crud.* 6.

On the 4th, the full moon day, the fever returned with great shivering three hours earlier than on the preceding fever day. During the height of the fever my mind was confused and I talked incoherently, there was great thirst, retention of urine and throbbing pains along the spine. Dr. Sircar omitted the antimony and ordered *natrum muriaticum* 12 of which I took two doses that day and two doses the next day. On the morning of the 8th, the fever day, I took two doses before the expected time of the recurrence of the fever, and there was no return of the fever. The throbbing pains of the spine continued for 3 or 4 days more and then left me. Ever since the 8th November I have had no return of the fever, but there is still a tendency to the recurrency of the shoulder pains at every new and full moon day.

Remarks.

I commend the case narrated above to the serious consideration of my professional brethren. I think I shall receive credit not only for sincerity and honesty, but also for ability to judge in my own case. I did not place myself under homœopathic treatment with any previous leaning towards the system, which, on the contrary, in common with the whole orthodox profession, I used to look upon as a mere sham, a thing utterly worthless,— at best, a do-nothing system. But my own case has staggered me, and I have thought it due to the system, to the whole profession, and to suffering humanity to give it publicity. I am not homœopath yet, but I must say the attitude of opposition to homœopathy exhibited by the profession towards it, is most unjust and unfair, because absolutely unfounded.

Gleanings from Contemporary Literature.

THE KIND OF ACTION OF DRUGS.

THE ACTION OF SMALL DOSES.

A LAW FOR THE DOSE.*

By William Sharp, M.D., F.R.S.

> "I wish you to get into the habit of contemplating the whole science of medicine under its simplest and plainest form."
>
> Sir Thomas Watson.

A knowledge of the action of drugs is certainly one part of the science of medicine. Let us try to follow the advice of Sir Thomas Watson, and seek this knowledge in "its simplest and plainest form."

The use of drugs as remedies in disease is so ancient, that the history of its origin has faded away from the human memory: it is a subject which, on account of this antiquity, claims to be approached with respect. The use of such medicines is co-extensive with the families of mankind: the subject deserves, on this account, to be handled with care. Above all, the use of drugs as remedies is needed only during human suffering, and in man's last agony on earth: it demands, therefore, to be discussed with seriousness.

Let us, to-day, approach this subject with respect; let us handle it with care, and discuss it with seriousness; and let us hope that a blessing from God will rest upon our endeavours.

The first thought which arises in the mind is a question which cannot be asked without surprise: how is it that, after so many centuries of the use of drugs, the knowledge of the right manner of using them is yet to be sought for? What is the answer?

With reference to all knowledge men are ignorant from two conditions: in one of these knowledge is placed; in the other, men themselves. The condition in which knowledge is placed is, that much of it is shrouded in darkness. God is light, and there is no darkness in Him; but he has seen fit to surround much knowledge with a darkness which is impenetrable by the eyes of men. These are hidden things, whether corporeal, intellectual, or spiritual, which belong to God.

The condition in which men are placed is, that there are things upon which the light shines—whether the light of the material sun, the light of reason, or the light of revelation—but we do not see them because our eyes are blinded. This knowledge is attainable, but we are ignorant of it. These things belong to man, and he ought to know them. What his eyes can see, if he will use them aright, he may and ought to learn. Truth, then, is like the sun; God may hide it from us by placing clouds before its face; or it may shine brightly, and we may not be able to see it, because we are blind.

Now, in the department of medicine there is much which is hidden in darkness, and which we cannot know; but there is also much upon which the light shines, and it is our blindness alone which prevents us seeing it.

Let us try to use our eyes both of body and mind, for the power of seeing is strengthened by use. We have to exercise our bodily senses in observing what is presented to them; and we have to engage our minds in remembering, thinking about, and comparing the resemblances and contrasting the differences of the things we have observed.

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* Being the Presidential Address delivered at the Congress of British Members of the Medical Profession practising Homœopathy held at Leamington, September 11th, 1873.

Before we can so use our eyes much dust has to be removed. A great blinder of the eyes is prejudice, another is self-interest, another is indolence, another is pride, another is self-conceit; all these throw dust into the eyes, and prevent us seeing things upon which the light shines. Let us wipe away this dust. These are evil conditions which beset us all, like so many cuttle-fishes spirting out their inky juices, and preventing the mind seeing and feeding upon the objects provided for its nourishment and growth. Let us labour to get rid of these evil conditions, always remembering that it is a great mistake to try rather to penetrate into God's darkness than to remove our own blindness.

Some portions of the impenetrable darkness have been pointed out in former Essays. For instance, that the *efficient cause*, or the *essence* of the action of drugs cannot be known to us, has been argued. Again, the great evil of feigning *hypotheses* to explain this hidden thing has been insisted upon. And here, to prevent a misunderstanding, suffer me to say that this word "hypothesis" is used in two senses; in one sense it is useful to the progress of science; in the other it is the bane of science. "Hypotheses" or conjectures are of great use to *suggest* further enquiries and experiments; to *explain* unknown things they are hurtful and obstructive.

We will now make an effort to open our eyes, and to look at the action of drugs in "its simplest and plainest forms."

To this end we will first notice briefly three propositions respecting the action of drugs which may be considered as proved, and, I think, as accepted by the assembly I have now the privilege of addressing. This, for the purpose of making the propositions which are to follow more easily understood.

1. *Homœopathy in the general.*

What are remedies? Poisons are remedies. "It has been heard of old time in the world, that poison is the antidote to poison." This is as the proposition was expressed three or four thousand years ago. In modern times, and in the language of Shakspeare, it is expressed in the words "In poison there is physic." This is startling. How contrary to anticipation, to *à priori* reasoning, that that which does harm in health should do good in sickness! The human mind would never have discovered this by ages spent in cogitation and reasoning. Our knowledge of it is wholly due to observation. It is a *fact*, not contrary to reason, but beyond its reach. Nevertheless, our knowledge of its certainty is such that, as a proposition it is indisputable. BRODIE himself could not doubt it. *Arsenic* and *aconite*, *mercury* and *belladonna*, *copper* and *veratrum* are among the most deadly poisons we are acquainted with; and are they not also among the best remedies we possess? This lies before us as a plain fact of observation admitting of no question—much less open to any denial.

But how have mankind acted upon and carried out in practice this great principle? Truly with many blunders. Enormous doses of powerful poisons have been given, under the guidance of false views, in all ages, to the grievous detriment of the sick. Even HIPPOCRATES himself sometimes killed his patients with *hellebore*. Men in modern times have been misled in the same manner. Mr. Annesley's magnificent quartos, *On the Diseases of India*, are filled with scruple doses of *calomel*. Dr. Rasori boasts of giving half-drachm doses of *tartar-emetic* in pneumonia, and others follow in his wake.

Such abuses as these have tended to bring the use of medicines into discredit; this tendency has been much increased since the manifest failure of the ordinary treatment of disease has been placed besides the success of the small doses of homœopathy, and so the expectant or nothing-do method is becoming the prevailing one of our time.

The abuse of a thing is not a good argument against its use; moreover, that which is true in the general must be true in its particulars. If all poisons are remedies, then each poison is a remedy, and the question arises, a remedy for what?

After ages of blundering and guessing, or to speak with more professional propriety, after the reign of a succession of hypotheses, we are indebted to SAMUEL HAHNEMANN for giving us the first part of the true answer. This brings us to the second proposition.

II. *Homœopathy in the individual.*

Drugs, when taken in health in certain doses, produce symptoms which are peculiar to, and characteristic of, each drug; and when given in smaller doses in diseases having similar symptoms, they are the best remedies for those diseases. Homœopathy in the individual. This is Hahnemann's homœopathy "simila similibus curantur."

Whoever will look with open eyes at the experiments which have been made on healthy and on sick persons, during the present century, will be constrained to admit that the detail of facts summed up in this second proposition makes a statement as undeniable and as indisputable as is the general fact expressed in the first proposition.

Does not *arsenic* in certain large doses produce inflammation of the stomach and bowels? In certain small doses it cures both. Does not *phosphorus* cause congestion and inflammation of the lungs and bowels? We see it in smaller doses cure these diseases in a surprising manner. Does not *opium* in certain doses bring on congestion of the veins of the brain—one form of apoplexy? We see it in certain small doses cure such congestion, and stave off attacks of apoplexy threatening to be fatal. Do not *cantharides* cause strangury? And was not Dr. Greenfield sent to Newgate by the President of the College of Physicians for curing strangury with these spanish flies? And this notwithstanding that Hippocrates, more than twenty centuries before, had said that "what causes a strangury will cure it?" And thus of all the rest, for it is so true of every known drug, that it may safely be predicated of every unknown drug. Therefore it is a true induction. Does not *veratrum* in one dose produce cholera, and in another cure it? Does not *belladonna* inflame the brain, eyes, and throat, and does it not cure similar inflammations every day? And *bryony* cause rheumatism, and cure it? And *ipecacuanha* sickness, and *rhubarb* diarrhœa, and cure them? But where shall we stop? There is no known exception to this rule. We might as well be asked whether we are now sitting in light or in darkness, as be asked if we can doubt this proposition of Hahnemann.

The proposition has, indeed, been denied, misrepresented, and ridiculed in an amazing manner, and with amazing perseverance; but it is true notwithstanding, and its reception by the medical profession as a body cannot be long deferred. The real difficulties which surround it, the substantial objections which may be urged against it, we will notice by-and-bye, and I think it will be our privilege to see them removed.'

The various ways in which the discovery of the action and use of drugs may be sought for have so recently been studied in these Essays, they need not detain us now. Here we are agreed that the true method of making this discovery is, first to observe the effects produced by drugs upon health, and then to observe their effects upon disease.

By pursuing this method Hahnemann was led to make the announcement of the dogma, "*similia similibus curantur*," which he explains in these words :—

"Take the medicines according to the symptoms careful and repeated observation has shown they produce in the healthy body, and administer them in every case of disease that presents a group of symptoms comprised in the array of symptoms the medicine to be employed is capable of producing on the healthy body ; thus will you cure the disease surely and easily."*

This was the first modern statement of a guiding principle. The first view of the pole-star in medicine. Like the pole-star in the heavens, when first viewed by the naked eye it appeared to be but one star ; moreover, as so seen it was nebulous, hazy, indistinct.

It has just now been remarked that there are difficulties which beset this proposition as stated by Hahnemann, and which are true objections to it.

The first of these is the haziness or indistinctness which surrounds it. This defect robs it of its brightness in a scientific point of view.

It is a two-fold defect, for this indistinctness or indefiniteness belongs to it in two directions. One of these is *the indefiniteness of its application.* Hahnemann made his principle applicable to an unlimited extent. For example, he imagined it to apply to the physical agencies of light, heat, electricity, and magnetism ; again, to the moral feelings ; and again, to the action of one disease upon another. These obscurities were fully discussed, and, it is hoped, cleared away in the early Essays of this investigation ; and do not require to be noticed now beyond the remark that it seems to be proved in those Essays that the principle called homœopathy is limited in its application to the action of drugs.

The other direction of this defect lies in *the indefiniteness of similarity itself.* The term "like" or "similar" is too vague to satisfy scientific accuracy. In this sense also, as well as in the one just noticed, astronomers would call it nebulous, that is, wanting the defined lustre of a star. How is this defect to be removed ?

When we have looked at the pole-star in the heavens through the telescope of the astronomer, we have seen that it is not a single but a double star. When we have looked at the principle of homœopathy through the telescope of time we see that it also is not single but double. *Similarity* still remains as belonging to the symptoms, but *identity* makes itself visible as belonging to the seat of the symptoms. The first star, though hazy, continues to shine as before, but the second star shines also, and is less nebulous, less hazy, less indistinct. And this is the third proposition :—

III. *Organopathy.*

The symptoms which each drug produces, when taken in health, are assignable to certain parts of the body as their *seat ;* and they are remedies for the diseases of those parts. This is organopathy. The word is intended to express the identity of the seat of drug action and the seat of disease.

This proposition has been so fully stated and examined in former Essays that it does not need to be explained or vindicated now.

Like Hahnemann's proposition it has met with vigorous denial, opposition, and ridicule ; and it has been declared to be an old and exploded doctrine of a German called Rademacher, notwithstanding that the epitome of his notions given in the *British Journal of Homœopathy* plainly contradicts this accusation. But at our Congress at York last year we were told by Dr. Drysdale that now "nobody doubts it."

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* *Lesser Writ.*

Let me repeat. The principle of the founder of homœopathy, when limited as has been pointed out, remains in all its vigour. The comparison between the symptoms produced by large doses of drugs in health, and the symptoms presented to our observation in disease—all that Hahnemann meant to express by the phrase "*similia similibus curantur*," or by the word homœopathy, steadily abides.

And it may also be asserted that the identity of the seat of action of drugs, and of the seat of diseases for which they are remedies—which is the proposition meant to be expressed by the word organopathy—also remains unshaken by all that has been said against it.

We are now prepared to advance from these three propositions, which are known and received, to others with which we are less familiar.

IV. *The Kind of Action of Drugs.*

There is another difficulty or defect which belongs to Hahnemann's homœopathy which it is important that we should perceive clearly. It may be thus stated :—

The two portions of Hahnemann's method are the outside links of a chain of causes between which there are several unknown links. These two portions are the symptoms of diseases and the symptoms of drugs.

That drugs produce, when taken in sufficient doses in health, symptoms similar to those produced by other causes of disease, is a fact which does not require further proof at the present day. But the collocation or placing side by side of the symptoms of drugs and the symptoms of disease, so as to perceive their similarity, as is done by Hahnemann, is an empirical arrangement ; and consequently the rule of practice that the drug having similar symptoms is the remedy for the similar disease, deduced from this arrangement, is an empirical law.

It is to be observed that these symptoms or detached facts, thus placed side by side, are separated from each other by a considerable distance, and that there must be several links of unobserved facts between them, and by which, as so many intervening causes, they must be joined together. The two outside links are recognised by us, but the connecting links are not yet seen distinctly. It is a duty to endeavour to discover these intermediate links.

The first has already been pointed out ; it is the identity of the *seat* of action of drugs and diseases.

The second has now to be stated ; it is the identity of the *kind* of action of drugs and diseases.

The third will be indicated by-and-bye.

Drugs are distinguished not only by their symptoms, and by the seat or origin of the symptoms, but also by the *kind* of action by which the symptoms are produced.

It has often been stated in these Essays that each cause of disease has an action peculiar to itself, by which it is characterised, and by which it is distinguished from others. Drugs are a cause of disease, and the same is true of them. Each drug has an action peculiar to itself, by which it is characterised, and by which it is distinguished from every other drug. We are now considering the action of drugs on healthy persons.

This difference consists partly in the action being on different organs of the body, and partly in its being of a different kind. The characteristic symptoms being the joint effect of these two differences.

Organopathy, the subject of the last proposition, deals with the different localities of the action. For the most part its details are sufficiently intelligible.

The kind of action is a more subtle existence, harder to identify and distinguish. Where does it begin ?

The phenomena of life are a circle, and there is no visible beginning in a circle; but since we must begin our research somewhere, and since the blood is eminently the life, we may safely take the beginning of action to be in the blood. We will presume, therefore, that the first difference consists in a difference in the condition of the blood.

Each drug by its own presence produces this difference. This seems obvious. As each drug is a peculiar thing, its presence in the blood must be sufficient to constitute a peculiar condition of the blood. The living fluid, and the life of that living fluid, are affected by the presence of this foreign and peculiar thing.

The next stage is the action of this changed blood upon the living solids of some particular organ, or organs of the body; the part acted upon has been called the protoplasm, or, by Dr. Lionel Beale, the bioplasm.

This action on the bioplasm produces the objective symptoms—the symptoms which can be perceived by the physician.

Simultaneously with this action on the bioplasm impressions are made on the nerves of the part. These impressions are conveyed to the brain, and give rise to the subjective symptoms—the morbid sensations felt by the patient.

Suffer me to place these ideas before you in other words:—

"The blood is the life," and we may believe that the first contact between life and the causes of disease, including drugs, takes place in this living fluid. Here is the first meeting, the first impression, the first action, the first change from health, the first morbid phenomenon; the link in the chain which connects the exciting cause with all the successive phenomena of any disease whatever.

From this beginning arise inflammatory conditions of the arteries, congestions of the veins, obstructions in the glands, irregular contractions and paralysis of the muscles, derangements of the digestive and respiratory processes, morbid nutrition, altered structure, disease of all parts.

From this also spring all kinds of painful sensations and morbid feelings.

The condition of the blood, therefore, admits of as many alterations as there are kinds of substances which can enter into it and act upon its life.

If we take this condition of the blood as included in our present enquiry into the kind of action, there will be as many different kinds of action as there are causes of disease, or kinds of drugs.

Of many of these kinds of action, and even of the existence of their causes, we should have no knowledge, but for the differences in their subsequent effects. For example: the causes of some contagious diseases are so subtle as to elude our observations. They act upon the same parts but give rise to very different symptoms; proving that the *kind* of action is different. They require different remedies, and the difference in the symptoms both points out the difference in the kind of action, and directs us in the choice of the remedy.

These remarks apply only to material causes of disease and material remedies. The mind has also power to disturb health, and even to destroy life. It may act upon the blood through the brain and nerves. It can derange the functions of any vital organ.

Thus it appears that drugs have many kinds of action. How are we to become acquainted with them?

Let us first have a clear perception that the action itself in its essence, that is, the link which joins the proximate cause to the proximate effect is one of the unknowable things; and let us not be ashamed to confess this. There are many things which we cannot *do:* such were the dreams of the alchemists, who tried in vain to turn lead into gold, and to discover the elixir of life; and there are many things which we cannot *know*, and we waste our time if we try to find them out. God's way of working in this sense is hidden from us.

Man's pride has made him labour to hide this unavoidable ignorance from himself by the invention of explanatory hypotheses or conjectures. Suffer me to repeat once more my protest against such hypotheses in medicine. They are the greatest barrier to progress which exists. Facts are grains of gold, and hypotheses are the mountains which cover them.

Another protest I ask leave to make against the use of words and phrases which are either void of meaning, or to which only undefined ideas can be attached. They are counterfeit coins of no intrinsic value, and serve only to deceive. True words are the current money of the mind. The word "catalysis" in chemistry is an example of a meaningless word: and in "The Nomenclature of Diseases," published by the authority of the Royal College of Physicians, the first division of "General Diseases" is a vague and undefined phrase from which nothing is learned. What is meant by calling "hooping cough" and "mumps" "diseases of the general system?" There is nothing in nature but individuals; nothing in disease but disease of individual parts; nothing in the action of drugs but action upon one or more of these individual parts.

We admit, then, that the manner in which drugs act, or the action itself, is beyond our power to discover. We remember that the action is always a local action, the antecedent cause of which, and its consequent effects, are phenomena we can observe, let us now enquire how this knowledge which is within our reach is to be obtained?

It is to be learned in the same manner as the knowledge of the seat where the action takes place, by experiments on healthy persons.

Experiments in health were made on a large scale first by Hahnemann. The results are recorded by him in a peculiar manner in his "Materia Medica" and "Chronic Diseases." They have been added to by similar experiments similarly arranged by others. These volumes have hitherto been the guide followed in the greatest part of homœopathic practice. They exhibit in great detail the symptoms caused by each drug. From these symptoms we may often learn both the seat and the kind of action of the drug to which the symptoms belong.

These experiments have commonly been made with large doses of drugs: doses sufficient to produce considerable and sometimes very great disturbance of health. The knowledge acquired is that of the action of large doses. Further experiments are required to be undertaken with the *intention* to discover the seat and the kind of action.

Nearly all experiments before Hahnemann, with such doses of drugs, were made upon the sick. The object of both sets of experiments, that is, both on the healthy and on the sick, is the discovery of the uses of drugs as remedies for disease. These two great labours of physicians resemble the tunnelling of Mont Cenis; an arduous work begun on opposite sides, of the mountain; by the French on one side, and by the Italians on the other. Each had some miles to penetrate, and to persevere until it met the other. The earlier physicians laboured for centuries, guided by the notion that the action sought for must be of a *contrary kind* to that of the disease. The latter ones have worked on till they have met the other, and the result is a surprise. It is the discovery that the compass which is to guide us in future is an action of the *same kind* as that of the disease.

The ideas I wish to communicate to you on this subject may, perhaps, be made clearer by giving some details relative to the action of particular drugs.

The heart. Aconite and digitalis. These plants have a powerful and well known action upon the heart. In the doses commonly experimented with in health, or to speak with more precision, in a certain range of doses, aconite quickens the movements of the heart, and digitalis diminishes them. The locality or seat of the action of these two drugs is the same.

The kind of action of one is in the opposite direction to that of the other. They are antidotes to each other. Aconite is given as a remedy when the heart beats too quickly. Digitalis when it beats too slowly. The *kind* of action of the drug is the same as the *kind* of action of the disease for which it is a remedy.

The brain. Opium and Belladonna. These act with great power upon the brain. In the doses just described opium congests the veins and produces apoplexy; belladonna distends the arteries and causes inflammation. They are respectively given as remedies for the same kind of action in disease. The locality of the action of opium and belladonna is not so identical, nor is the kind of action so directly opposite as in the preceding example, but the former is sufficiently connected, and the latter is sufficiently contrary to make these two drugs to some extent antidotes to each other.

Spine and spinal nerves. Nux vomica and cocculus. These two drugs act powerfully upon the spinal system of nerves. Their contrasted kind of action deserves more careful study, but it appears, at present, to be in opposite directions. Nux vomica tending to produce spasms, and cocculus paralysis. Each is given as a remedy in cases of disease which correspond to its own kind of action, so far as that has been ascertained.

Throat. Mercury and belladonna. The difference in the kind of action of these drugs is very visible. The former causes ulceration, the latter inflammation of the mucous membrane of the throat. They are respectively given, every day, as remedies for the same kind of unhealthy condition.

Muscles. Copper and lead. These two metals have a strong action upon the muscular fibre. The former causing spasmodic contractions, the latter paralysis. They are successfully prescribed as remedies in the same kinds of morbid states. They act upon the same organs, but in opposite directions, and so are antidotes to each other.

Uterus. Secale and actaa. These have an action on the same organ but in opposite directions. The former producing contraction, the latter relaxation. They are prescribed accordingly.

Bladder. Cannabis and cantharis. It deserves careful experimentation to learn how far these are contraries to each other in their kind of action on the bladder.

Iris. Belladonna and Calabar bean. The former dilates the pupil, and the latter contracts it; and they are remedies accordingly.

Of course a large number of drugs have actions which are different from, though not contrary to, each other in kind. The examples given are sufficient to explain distinctly what is meant by the *kind of action* of a drug.

By the discovery of two of the intermediate links, the outer ones upon which Hahnemann has hung the dogma "*similia similibus curantur*" have been brought into a clearer connection with each other. By this discovery the mystery in which the chain of causation was suspended is to some extent dissipated. The rule becomes less empirical, and is now not far removed from a true induction.

We have spoken of the principle of homœopathy as the pole-star of medicine: seen at first indistinctly it was hazy; on being looked at with more care a second star became visible: and having again been viewed attentively it is seen to consist of three bright stars instead of one. The astronomers would say that it is more satisfactorily defined.

Another simile has been used; the principle has been described as a basis or foundation. It is now three-sided, and it can support a three-sided column. On one of these sides "similarity of symptoms" was carved by Hahnemann; on the next is engraved "identity of seat of action;" and on the third is now written in legible characters "identity of kind of action."

This chapter shall close with a few brief remarks upon *symptoms*, and uses which may be made of them by thoughtful observation. They are of use—

1. To discover the seat of disease. For this purpose some symptoms are of much greater value than others.

In the same manner the seat of the action of each drug, if it is not actually visible, may be discovered from the symptoms. When a drug is prescribed as a remedy it must be able to act in the locality of the disease. In other words, the seat of the disease and the seat of the drug action, must, so far as we can ascertain, be the same.

2. To learn the kind of diseased action. For this also some symptoms are much more useful than others. When a drug is given as a remedy, its kind of action, so far as we can discover it, must be the same as the action of the disease. This second study of the symptoms serves to distinguish from each other the drugs which act upon the same organs.

These two uses are for the purposes of diagnosis and treatment.

3. To form an opinion of the probable result or termination of the illness. Again, some symptoms are much more of a guide than others. This is for prognosis. Sometimes the symptoms which at once decide the diagnosis are quite different from those which should guide the treatment, and both these may differ from the symptoms which determine our opinion of the probable result.

It is to be noted that the previous symptoms from the commencement of the illness, or what is called the history of the case, require attention as well as those which form the present condition of the patient.

We will now go in search of another of the yet undiscovered links in this wonderful chain of causes which join together the two outside links, the symptoms of drugs with the symptoms of diseases.

V. *The Action of Small Doses.*

My brethren, the time is come when the dangerous question of the small dose must again be taken up. Twenty years ago, as some of you may remember, I wrote an Essay upon it with deep interest. The novelty of the subject and its beauty charmed me, and I heartily desired that its contemplation might give as much pleasure to others as it did to myself. Since that time, whenever the purpose of continuing it has arisen, increasing difficulties have gathered round me, till I saw that the small dose could not be further dealt with, unless the principle of homœopathy could be placed upon a more stable foundation, and in a clearer light.

This task, I flatter myself, has now been accomplished.

The resumption of the pursuit after the truth of the small dose can, therefore, be no longer deferred. But it is a doleful and a thorny path, and in entering upon it I am reminded at the same moment, by its dolefulness of Æneas's trouble when Dido asked him to recount the disasters of the seige of Troy:—

> "Infandum, Regina, jubes renovare dolorem;"

and by its prickles, of those sturdy thistles which are the national emblem of our northern neighbours, and which are surrounded by the appropriate motto:—

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Nevertheless, the time, which neither troubles nor prickles can postpone, is come, and the path must now be trodden.

An attentive persual of the 14th and 15th of Dr. Dudgeon's 'Lectures on the theory and practice of Homœopathy' is sufficient to convince us that

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An attentive persual of the 14th and 15th of Dr. Dudgeon's 'Lectures on the theory and practice of Homœopathy' is sufficient to convince us that the question of dose is lost in the same dark labyrinth in the new school of medicine, that the question of remedy is in the old school. There are plenty of judgments given in each school on the difficulty which agitates it, and all these judgments profess to be based on experience. The results in both cases are a lively illustration of the truth of two portions of the first aphorism of Hippocrates, namely, that "experience is deceitful, and judgment difficult."*

Nothing can be more variable, nothing can be more contradictory than the many judgments given by Hahnemann himself, upon the doses of medicine. Sometimes he recommends substantial doses, little differing from common ones. Sometimes excessively small quantities, but these varying with each drug, with nature of each disease, and with the susceptibilities of each patient. At one time he advocates the use of the smallest doses in acute disease, and larger ones in chronic cases ; and he finally closes the subject by fixing upon the 30th dilution as the proper dose of every drug and for every disease. He laid down this law, but he did not himself follow it ; he laid it down to bind others, but they have never been bound by it. The changes in Hahnemann's teaching on this and on other important points of medical doctrine and practice have drawn from Dr. Dudgeon the following damaging reflection :—

"How curious it is to observe that Hahnemann continually contradicts himself on almost every point of his doctrines and practice ; and still more curious it is to notice that the contradiction is generally side by side with the opposite statement."†

There are no doses which Hahnemann has not at one time adopted, and at another abandoned. So that, in truth, the question is left by him in the greatest confusion. He sometimes used appreciable doses, and he introduced the use of indescribably small doses, but he discovered no clue by which we might be guided in this labyrinth.

Nor are the judgments pronounced by succeeding writers in the new school on the doses of medicines in any degree less contradictory.

Dr. Rau says : "The best guide is the maxim that the susceptibility of the organism for homogeneous irritation is in the direct ratio of the violence of the disease. Thus the more violent and acute the disease, the smaller must be the dose of the remedy, and the larger must it be, the longer the disease has lasted and the more chronic its character is."‡

On the contrary, Dr. Trinks says, the maxims that experience has determined are—

"1. Acute diseases require the lower (stronger) dilutions.

"2. Chronic diseases higher (smaller), and often the highest (smallest) attenuations.

"3. There are may exceptions to this."

Dr. Dudgeon himself seems to adopt this view. He says :—

"Though we are still considerably in the dark with respect to the suitable dose of a remedy, I think this darkness has been partially dispelled by the experience of so many homœopathic practitioners extended over so many years. This experience seems to show that the more material doses, or the lower dilutions of medicines, ... are best adapted to diseases of rapid course and considerable violence ; and that the higher dilutions are better adapted to diseases of a more chronic character ; but there are many exceptions to this."

Dr. Geddes Scott in like manner argues that the potency to be chosen is determined by the character of the disease.

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* See also the leading article in the *Monthly Homœopathic Review* for August, 1871 (Vol. XV. page 449) by Dr. Pope ; which contains as good a summary of the present state of knowledge and opinion on the question of dose as could be given.

† Dr. Dudgeon's *Lectures*, page 406.

‡ *Ibid*, page 405.

There are many other maxims and rules given by other writers which would occupy too much time were I to quote them.

Of these maxims and rules I beg you to observe two things :—

First. The authors of them admit that there are many exceptions to them ; so that they can have no claim to be received as natural laws. They resemble the rules of grammar, not the laws by which God governs His works.

Secondly. They are derived from the same barren source from which the old schools of medicine have, in all ages, attempted to derive rules for the choice of remedies—namely, the consideration of the disease and of the patient, *not of the properties of the drug.* Now, Hahnemann's law of homœopathy was discovered by forsaking this path, and following another. He turned his attention to the action of drugs in health. It is surprising that homœopathists should have been beguiled into following again the old course, which had so signally failed, and should have expected to find rules for the dose in this way.

The knowledge we desire, and which we are now in search of, is the knowledge of the action on disease of small doses of drugs. How is it to be obtained ?

It is said on all sides that the only way of learning the action of these doses, and how to choose the best, is the way of *experience.* But experience without a guide is a ship without a compass. Blind experience teaches little. It is always justifying the condemnation pronounced upon it by Hippocrates, and proving itself deceitful. The method of experience has failed. A *guide* for experience is needed ; how is it to be found ? Not by experiments on disease itself. These experiments have been made for many years, and by many physicians, and the guide has not been found.

Attention to Lord Bacon's Sixth Aphorism will help us :—

" It would be madness to suppose that things which have never yet been performed, can be performed without employing some hitherto untried means."

What means are there yet untried which we may adopt with renewed hope of success ? For several years I have urged upon my colleagues the necessity of learning the action of different doses in the manner that Hahnemann discovered the action of different drugs. By experiments with them in health.

As far as I am aware no one has yet taken up this work. I shall, therefore, now endeavour to recommend it again, not by showing its necessity, but by beginning to do it.

The action of large doses—that is, of poisonous and of ordinary medicinal doses—has been made known to us, to a great extent, by cases of poisoning, and by provings, or voluntary experiments with them, in health.

The action of small doses, *as distinct from that of large ones,* has not been studied by separate provings of them in health. This knowledge is demanded, and it is the search for it which I have attempted to begin.

Experiments with small doses.

These experiments have been carried on for some time during every opportunity of leisure. They have embraced a considerable variety of drugs ; among them these :—

Aconite.
Digitalis.
Phosphorus.
Spigelia.
Opium.
Veratrum.

Mercury.
Tartar emetic.

Most of the experiments have been several times repeated. The doses experimented with have not embraced quantities smaller than the first centesimal dilution or trituration: that is, the hundredth part of a drop of the sap of a plant, or the hundredth part of a grain of a mineral. No opinion respecting the action of smaller doses than these is given; they remain to be investigated by others. Nearly all the experiments were made upon myself, and under conditions as nearly uniform as was possible; this has appeared to me a great advantage. It may be remarked that I am sensitive to the action of small doses, having taken none other for three and twenty years; it is not presumed, therefore, that *exactly the same doses* will be followed in every one by the same effects; but it is believed that these experiments have been so carefully made that they are typical, and that the same results will follow in all other experiments, made with equal care, *within a certain range* of these doses.

This is not the opportunity to give the details of these experiments, but I am happy to be able to state some of the conclusions which may be drawn from them, and to give some brief examples.

And, first, of individual drugs:—

Aconite.

Aconite seems to have at least four different kinds of action upon the heart, which are dependent upon the dose.

First action. One or two drops of the first centesimal dilution first quickens the heart's action for a short time (one, two, or three minutes), then retards it.

e.g., Oct. 19, 1872, one or two drops of this tincture taken in separate experiments, when the pulse was 80, in one minute raised it to 82, in two minutes to 84 or 86, then, after the third minute, it fell to 82, and after the fourth minute to 78 or 76.

Second action. One or two drops of the sap of the plant (two or four drops of the "mother tincture") quickens the heart's action, and no retardation follows.

e.g., Dec. 3, 1872, my pulse at 72 was raised in three minutes to 75, in five minutes to 78; it fell in ten minutes to 76, in fifteen minutes to 73, and in twenty minutes from the commencement of the experiment to 72, at which it remained.

Third action. We know from many published cases that larger doses than these (several, or many drops of the tincture) first depress the heart's action for a short time, then quicken it very much.

Fourth action. From similar sources we learn that still larger doses (some solid portions of the plant itself) destroy life during the first depressing action. Mr. Gordon, of Dingwall, died in this manner.

These four kinds of action of aconite may be reduced to two in their tendencies. First, the action of small doses; the tendency of these is to quicken and then to retard the pulse. Second, the action of larger doses; the tendency of these is to retard or depress, and then to quicken the heart's beats. When the experiments fail to produce these consecutive effects there is some impediment in the way.

Aconite, then, in small doses, quickens the heart's action for a brief period before it retards it. This has probably been observed for the first time. The observation surprised me.

It very soon makes the pulse slower. This we are all familiar with in the use of aconite as a remedy in inflammatory fever. I lately saw a pulse of 130 brought down to 40 in about three days, by repeated doses of this first dilution of aconite.

The range of these small doses having this action on me lies between the first dilution and the one-fifth part of a drop of the mother tincture: that is, from the hundredth to the tenth part of a drop of the sap. It is probable that in others it may lie between this tenth part and a whole drop.

Of all these varied actions of aconite upon the heart the only truly curative influence is the second action of the small dose. It follows that the only legitimate use of aconite is in doses which produce this retarded motion of the heart.

Digitalis.

Hahnemann says that aconite and digitalis are "analogous remedies." It is true that the locality of their action the heart is the same, but their kind of action on this organ is in opposite directions.

Oct. 21, 1872. 7.30 A. M.
Pulse 80.
One drop of Tinct. Digitalis 1 (cent.), taken.

1st minute, 80.
2nd ,, 80.
3rd ,, 80.
4th ,, 80.
5th ,, 80.

6th minute, 80, second drop taken
7th ,, 76.
8th ,, 76.
10th ,, 78.
12th ,, 76.
14th ,, 78.
16th ,, 80.
20th ,, 80.
21st minute, 80, third drop taken.
22nd ,, 76.
23th ,, 76.
25th ,, 76.
27th ,, 78.
29th ,, 78.
30th ,, 80.
32nd ,, 83.
34th ,, 84.
36th ,, 85.
40th ,, 84.
63rd ,, 80.

It will be noticed that this action is the reverse of that of similar doses of aconite.

8.30 A.M., an hour after commencing the proving, there was a very decided action on the kidneys, shown in increased secretion.

A second kind of action is produced by doses of digitalis a hundred times larger than these:—

Dec. 2, 1872. 12.30 P.M.

Pulse 64.

Two drops of Tinct. Digitalis φ taken (equal to one drop of the sap of the plant.)

5th	minute,	68.
10th	„	72.
15th	„	68.
50th	„	64.

At which it remained.

Three and four times this quantity produces a third kind of action :—

June 11, 1873. 7.35 A.M.

Pulse 66.

Six drops of Tinct. Digitalis φ taken.

2nd	minute,	68.
4th	„	67.
6th	„	66.
8th	„	67.
10th	„	68.
15th	„	66.
20th	„	63.
25th	„	64.

June 16, 1873. 7.50 P.M.

Pulse 72.

Eight drops of Tinct. Dig. φ taken.

2nd	minute,	73.
4th	„	74.
6th	„	76.
10th	„	74.
40th	„	72.
60th	„	66.
80th	„	64.
100th	„	72.

The result of these and similar experiments with digitalis, both in health and sickness, is the conviction that the curative action of this plant is the second action of the first centesimal dilution. This is the power which it possesses of increasing the contractile force of the heart—both in frequency and strength. It is the direct opposite of aconite. In old language aconite is a febrifuge ; digitalis a tonic. It is my belief that these drugs are never legitimately employed as remedies in affections of the heart except in these two opposite capacities.

It is further worthy of notice, in relation to these two plants, that they both have a powerful action upon the kidneys, and that they both act upon this organ in the same direction. A certain range of doses of aconite and of digitalis increase the secretion of urine, and a certain range of larger doses of both cause suppression of it.

Your time must not be occupied with *cases*, but one may be given as an example :—

Case.—Mrs. S., a stout lady, of 58, has frequently suffered from disturbance of the heart, the first occasion of which was an attack of rheumatic fever, and which is characterised by a feeble and intermitting pulse, a sense, not of acute pain, but of great discomfort about the heart, especially when walking, and general weakness. This state of things has been repeatedly removed in a few days by digitalis. The dose is one drop of the first centesimal dilution, the hundredth part of a drop of the sap, three times a day. The intermission in the beats of the heart ceases soon after beginning to take the medicine, and the pulse becomes slower and stronger. The benefit derived by the patient is always very striking to herself.

Let it be remembered that aconite and digitalis are opposites in their action on the heart. They are, in fact, antidotes to each other. The action of the two is as opposed as the action of belladonna and calabar bean upon the pupil. If we would use them aright as remedies we must give aconite to diminish its power and digitalis to increase it.

Phosphorus.

We are indebted to Hahnemann for teaching us how to make the doses of this poisonous substance small enough to be used with safety and success as a remedy. We learn that in the doses he used in his provings of it, its action on the heart is powerful. He gives these symptoms : –

"Fever with small, hard, quick pulse. Accelerated circulation of the blood. Throbbing of the carotids. Pulse quick and full ; or, pulse quick and faint."

On the principle of *similia*, &c., therefore, it is used in inflammation and inflammatory fever.

The following is a careful proving of a small dose :—

Oct. 19, 1872. 8 P.M. Pulse 74.
One drop of Tinct. Phosp. 1 (cent.) taken.

1st minute, 76.
2nd „ 76.
3rd „ 74.
4th „ 72.
5th „ 72.
6th „ 72.
7th „ 70.
8th „ 70.
10th „ 72.
20th „ 74.
Which continued.
8.30. Pulse 74.

Second drop taken.

1st minute, 72.
2nd „ 72.
3rd „ 72.
4th „ 70.
5th „ 70.
6th „ 70.
7th „ 70.
8th „ 72.
10th „ 72.
20th „ 70.
Which continued some time longer.

From these experiments it appears that phosphorus acts upon the heart in small doses in the same manner that aconite does in similar doses. So that, to this extent, its use in inflammation and inflammatory fever is justified.

Spigelia.

It has often been remarked with regret that Hahnemann does not tell us the doses he experimented with in his provings of drugs in health. We may, however, form some idea of the doses of spigelia used by him from his preface to the proving of this plant. He says :—

"The provings ought to be instituted with the greatest care, inasmuch as even *sixty, eighty*, or a *hundred drops* of the tincture produce powerful effects in even robust and very healthy persons."

From such experiments as these we learn that spigelia acts strongly upon the heart. The pulse is said to be irregular, now slow, now quick ; it falls from 72 to 54. Palpitation and unusually strong beatings of the heart, &c.

The following proving shows very accurately the action of a small dose of spigelia upon the heart :—

Oct. 21, 1872. Evening 7.20.
Pulse 77.
Tinct. Spig. 1 (cent.). One drop taken in 2 dr. of water.

1st	minute,	76.
4th	„	75.
8th	„	78.
10th	„	77.
12th	„	77.
20th	„	77.

7.40. Pulse 77. A second drop taken.

2nd	minute,	79.
5th	„	78.
10th	„	78.
15th	„	78.
20th	„	78.

8.0 o'clock. Pulse 78. A third drop taken.

2nd	minute,	80.			
5th	„	80.	Respirations	10	and deep.
10th	„	82.	„	8	„
15th	„	84.	„	6	„
20th	„	80.	„	8	„
25th	„	79.	„	10	„
30th	„	79.	„	14	no longer de
35th	„	78.	„	16	„
60th	„	77.	„	17	natural.

Taken by surprise by the slow and deep breathing.

It will be observed that this action of spigelia on the heart is the opposite of the action of phosphorus and aconite, and that it corresponds with that of digitalis. Its use as a remedy is indicated as one similar to the use of digitalis— to strengthen the action of a feeble heart.

It will also be observed that a new element is introduced in this proving, namely, the function of respiration.

Let us linger over this a few moments. The effect, after the third dose of spigelia, was very remarkable. It took me quite by surprise. The breathings became so slow and so deep that it was in fact a process of slow and deep sighing. This ought to be remembered when we meet with a similar condition of respiration in a patient, especially in connection with a feeble heart.

It may be objected that the respiratory function is not so entirely removed from voluntary influence as the heart's action is, and that this slow breathing may have been, partly at least, my own doing. To obviate this objection experiments were made (on Nov. 22, 1872) on *voluntary* slow and quick breathing.

It was found that it is possible to get over a minute with *three* breathings; or to make above *thirty*. But the effort required to accomplish either of these feats is considerable; so that a conscientious experimenter can have no difficulty in avoiding this cause of error. He can distinguish very well involuntary slow or quick breathing from any such efforts of his own.

It should be remarked that in these provings of small doses of drugs, intimations that other organs were slightly affected were occasionally given; for instance, while taking the spigelia, a shoot of pain through the forehead was felt. But these are omitted to prevent complications and distractions of thought.

Opium.

This is considered the most valuable of all drugs by the ordinary practitioner, and he gives it every day as a sedative and as an astringent.

It is well known that large doses of opium, or its tincture laudanum, do possess these two kinds of action.

It is also well known that comparatively small doses (from the eighth to a quarter of a grain or more) have a contrary action: that is, a stimulant one upon the circulation and the nervous system. This action, though known, is not much taken advantage of by physicians. It is sought for by a large multitude of people who take opium themselves.

It is not yet known that such small doses as are under investigation in this essay also possess the power of increasing the heart's action, and of enlivening the brain.

I have tried many experiments with doses from the hundredth part of a drop (the first dilution) to two drops of the tincture of opium, and in every instance the pulse has been quickened, and sometimes rendered sensibly fuller, in two or three minutes, *e.g.*, from 66 to 68 and from 70 to 76. After a longer or shorter interval, *e.g.*, in from five minutes to an hour, determined by the dose, the beats return to what they were at the beginning, and sometimes afterwards descend a little below this. The manifest effect, in all these experiments, is increase of frequency, and often of fulness also.

The contrary of the small dose to the astringent effect of the large one is known only to homœopathists; but they do not always avail themselves of this knowledge as they might do. This is really a serious neglect, and in order to direct more attention to this valuable action of opium, I think it right to put on record the following case:—

Case.—An officer in the army, holding a high position in India, was in England in 1872. He was in good health, but inconvenienced by constipated bowels. He placed himself under the care of a very popular homœopathic physician in London, who prescribed for him for five months. Among the remedies prescribed were nitric acid, 1 dec. ʒ iij. in aq. ℥ iv.: a teaspoonful in water twice a day; bryonia, ϕ ʒij. seven drops in water night and morning; podophyllum, gr. iij. sacch. lac. gr. vj. six powders, one at bed-time; tinct. hydrastis, ϕ ʒij. 7 or 8 drops in water night and morning; acid phosphor. Ph. B. 10 drops in water, twice a day; tinct. chin. nitr. 1 dec. ʒiv. aq. ad. ℥ viij., a tablespoonful in water 2 or 3 times a day; tinct. nucis vom. ϕ gutt. xij.; sacch. lac. gr. xij. in a powder for an injection. Nux v. 1 dec. for two doses, &c. All this was without any benefit. He came down to Rugby in November. I gave him tinct. opii 1 (first centesimal dilution), part of a drop night and morning as long as required, but to be omitted when the bowels act. In March, 1873, he came again, and reported that the medicine for the bowles had answered perfectly; he had been two months without taking any; and was quite well. A degree of torpor or sluggishness of the bowels had, in fact, been his only ailment, and the small doses of opium had removed this.

Veratrum.

That white hellebore produces excessive diarrhœa has been well known since the days of Hippocrates. This is the action of the doses commonly given.

I have found that one drop of the first solution of the tincture (that is, the hundredth part of the drop of the sap of the plant), taken night and morning, will produce constipation in four or five days. The person upon whom this was proved was a healthy young man.

Mercury.

In the same manner it is very well known that preparations of mercury are given every day to produce relaxation of the bowels. Half a grain of the first or second trituration of metalic mercury taken night and morning for some time will constipate the bowels.

Tartar emetic.

The action of this salt of antimony, as learned from cases of poisoning and from the provings hitherto made, appears to be on

The stomach and bowels,
The skin,
The kidneys,
The heart,
The lungs.

The organs which commonly escape its action are

The brain and spinal nerves,
The voluntary muscles,
The bones and joints.

Not only the kind of action, but also the organs selected to be acted upon, depends upon the dose. A grain will act on the stomach and cause vomiting; a quarter of a grain will act on the bowels and purge; one-sixteenth of a grain repeated a few times will act on the skin, and produce perspiration. Some doses will bring out an eruption on the skin very closely resembling the eruption of smallpox. The question to be answered now is this: What will the hundredth part of a grain do?

Nov. 4, 1873. 7.0 P.M. Ant. Tart. 1. One drop in ʒj. of water.

		Pulse, 72		Breathings, 18.
	2nd min.	70	4th min.	20.
	5th „	72	8th „	18.
	10th „	67	12th „	14.
	15th „	72	18th „	13.
	20th „	71	24th „	12.
	25th „	74	28th „	10.
	30th „	68	Deep, uncomfortable sighings.	
Quickened by the deep breathing.	35th „	70	34th „	8.
	40th „	72	38th „	7.
	50th „	77	42nd „	6.
	60th „	66	52nd „	12.

60th „ 18 }
120th „ 66 ...... „ 18 } natural.

In this experiment the pulse, it will be seen, was slightly decreased in frequency, but the principle action was upon the respiratory process, which equalled that of spigelia.

This seems to be the place to notice the apparent *want of effect* of very large doses of some drugs. Tartar emetic, though so active a poison in doses of a grain or two, has been given in half-dram doses with little result. Tincture of digitalis has been given in ounce doses "with much less effect than might be imagined." "MM. Trousseau and Pidoux tell us that they have taken half an ounce of good asafœtida at one dose, with no other effect than that of altering the odour of their secretions, by which they were kept for two days in an infected atmosphere possessing a more horrible degree of fetidity than even asafœtida itself!" I know nothing which can be inferred from these remarkable facts.

These examples of the proving of small doses must suffice, but before proceeding to more general conclusions it may be useful to repeat the results obtained relative to the pulse and the breathing.

The Pulse.

Aconite first quickens, then retards the pulse.
Digitalis reverses this order.
Phosphorus acts as aconite does.
Spigelia reverses this also.
Bovista acts too slightly to detect any order.
Lead does the same.
Oleander first quickens the pulse.

The Respiration.

Spigelia reduced the breathings from 17 to 6.

Bovista raised them from 17 to 22.

Lead first depressed them from 18 to 15, then raised them to 20. A second dose reduced them to 11, then quickened them to 23.

Oleander first quickened, then lowered them, reversing the action of lead.

And let me make one observation on these facts. We find a great deal said in works on medicine on the sympathy of the different organs of the body with each other: as of the brain and stomach, the heart and lungs, the skin and kidneys, &c. And all this is true, and of great interest. But the other side of the subject is rather overlooked; that is the independent action even of organs most closely connected with each other, as in the above instances of the heart and lungs.

The action upon these organs, whether of disease or of drugs, is not necessarily of a uniform or equal character. The pulse may be either quickened or made slower, and not the breathing, or *vice versâ*. In a case of pneumonia I saw a short time ago, on one day the pulse was 130 and the breathings 30; the next day the pulse had fallen to 120 and the breathings had risen to 36. Still greater differences were observable in the provings just recorded, showing the same independency.

The following general conclusions, or inductions, may, I think, be safely drawn from the experiments which have been made with small doses:—

1. The kind of action of drugs varies with the dose.
2. This variation, in a certain range of large doses, amounts to opposition to the kind of action of another range of small doses.
3. The direction of this range of large doses is the same as that of the diseases for which they are remedies.

4. The direction of the range of small doses is in opposition to that of the diseases which they cure.

5. This opposite tendency is shown in health. Its cause, therefore, is not a difference in the state of the organ arising from disease, but in the quantity of the drug.

6. The varying conditions of disease have their influence on the action of drugs, but the effects of this influence are not at present under investigation.

We are now prepared to consider how the information, so carefully obtained, bears upon our position as homœopathists.

Those who have honoured the early Essay of this investigation with a perusal, will remember that attention was asked to the vague and indefinite character of Hahnemann's law of homœopathy. He, in fact, as we all know, extended its application on all sides. This vagueness is one reason why the teaching of Hahnemann has been so distasteful and unsatisfactory to the Medical profession.

It will be remembered that it has been carefully shown in these Essays that the law should be limited to the action of drugs.

The next step was an endeavour to prove that symptoms, whether of diseases or of drugs, must be traced to their seat: the organs which are the seat of the action, both of the disease and of the remedy, being the necessary substratum in which the action takes place.

You will see that it is now my duty to point out another limitation.

The rule of similarity of action, as manifested by the symptoms of diseases and of drugs—the law of homœopathy—must be confined to the action of comparatively *large doses* of drugs.

Taken in this restricted sense—restricted not only to drugs, but to large doses of drugs and to their action in health—the law or rule, we may venture to say, is irrefragable. It is a natural truth.

But it is a half-truth. This is another reason why it has not met with acceptance. Galileo's telescope consisted of two glasses: one had been looked through a long time by itself, but it was not till the other was found, and the two were placed so that both could be looked through together, that Jupiter's moons were seen.

Hahnemann's half-truth is the *similarity* of the action of large doses to the symptoms of diseases which small doses can cure.

The other half-truth now added is the *contrariety* of the action of small doses to the action of large doses, and consequently to the action of the diseases they are remedies for.

These two half-truths now put together make the treatment of disease as visible as Galileo's two glasses did Jupiter's moons. Those only who refuse to look through the glasses can fail to see either the one or the other.

A harmony in music is concord, the agreement of one note with another. A harmony in science, according to Lord Bacon, is the just adaptation of one part to another. The two parts of this subject, now joined together, make one harmonious whole.

You know that any two colours which, when combined, produce white light are called complementary colours. These two half-truths—the action of large doses and the opposite action of small ones—are the two complementary colours: their juxtaposition makes white light.

Hahnemann's homœopathy, I have said, is a half-truth. It is my privilege to-day to announce to you the other half-truth. I presume to think that the two halves make the whole truth, and that this will meet with your hearty acceptance.

The other half-truth then is this:—the action of small doses of drugs is in the opposite direction to the action of large doses. Therefore the law of Hahnemann, *similia similibus curantur*, remains true when limited to large doses; and the law of Galen, *contraria contrariis curantur*, is true when limited to the action of small doses; not true in Galen's sense, nor in any former sense put upon the phrase, but in a new sense, a sense which expresses a fact, and not a speculation.

VI. *A Law or Rule for the Dose.*

Some writers on homœopathy, as you know, have declared that a law for the dose is an impossibility. Such alarming prognostications lose a good deal of their gravity by repetition. I remember Dr. Lardner writing a pamphlet to prove that it was impossible for ships to cross the Atlantic by steam; and his pamphlet appeared just as a steamship reached America. Others have said that though a law may exist, the complexities surrounding it are so great, there is no probability that it can be discovered. Others again assert that "there is no necessary connection between the dose and the homœopathic law, the one exists quite independently of the other."*

On the other hand many laws have been suggested. I will not detain you by describing them; you will find them in Dr. Dudgeon's *Lectures.* They all have one condemning defect—they are hypothetical or speculative, and not statements of fact. And, in the words of Dr. Dudgeon, "the rule for the administration of the appropriate dose remains yet to be discovered."†

After the outline of the experiments recently made on small doses of drugs, given in the preceding chapter, you will, I think, already see that the impossibility of there being a law has vanished; that the improbability of its being discovered has also disappeared; and that instead of there being no connection between the dose and the principle, the connection is so close that it is one of absolute dependency—the principle itself being dependent upon the dose.

The law of *similia similibus curantur* belongs to, or is dependent upon, the action of a certain range of large doses; while the law of *contraria contrariis curantur* belongs to, or is dependent upon, the action of a certain range of small doses.

In other words, the curative action of small doses in disease and their physiological action in health are identical. The tendency of the drug in the small dose is towards the same action, whether the organ it acts upon is in a state of disease or of health.

The rule to which it is my happiness to invite your attention to-day has already been given you in the facts contained in the last chapter. It may be thus expressed:—

When a drug is prescribed as a remedy for a diseased organ, upon which it acts when taken in health, and for the kind of diseased action which, in certain large doses, it can produce in health, the dose must be small enough to be within the range of an action in the opposite direction.

For example—doses of *aconite* above a certain quantity cause a feverish pulse; doses below this certain quantity retard the pulse. The larger doses are injurious, the smaller are curative. Only the latter should be prescribed as remedies.

And so it is with every drug. It is simply a matter of experiment in health to find out for each drug the dividing line above which its action is hurtful, and below which it is curative.

This, of course, will be a work of labour and care; but so is the proving of drugs at all; and so is the practice of medicine in any form. The advantage we have now gained is a clear perception of the work to be done, and how to do it.

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* Dr. Black, *Address at York*, 1872.
† *Lectures*, page 560.

You have now, I believe, the law of the dose; that in every case the dose chosen should be within the range of the small dose action, which, be it remembered, is always, as a matter of fact, contrary to the large dose action; and claims to be the only legitimate heir to whom the maxim *contraria* of right belongs.

In the early part of this address two similies were used which may now be perfected. One was that of a chain. It was said that Hahnemann's homœopathy—the symptoms of diseases, and the similar symptoms of drugs—form two links at the opposite ends of a chain. These two links are therefore, separated by intervening links, which have hitherto been concealed. The connection which plainly exists between the two end links was unexplained, and the law of *similia* was an empirical law. Two of these intervening links were then described, first, the seat of the disease and the seat of the action of the drug are the same; and second, the kind of action of both are the same. It was promised that a third link should be described by and bye. This third link has now been exhibited to you; it is the opposition of the action of the small dose to that of the large dose. These three links make plain to reason the connection between the links at each end. We have now a completed series of causation, and the law which was empirical becomes rational.

The other simile was that of a triangular basis and a three-sided column erected upon it, with inscriptions on each side. This must now be enlarged into a hexagonal foundation and a six-sided pillar. The six sides have six principles engraved on them, to forget for the moment the historical order of their discovery, in the following succession:—On the first side "in poison there is physic." On the second side "identity of seat of action of disease and of drug." On the third "identity of kind of action of disease and of large doses of the drug." On the fourth "similarity of the symptoms of disease and those of large doses of the remedy." On the fifth "contrariety of the action of small doses and large ones." And on the sixth "the dose of the remedy must always be within the limits of this contrary action."

It may be asked, is there anything to guide our choice of a dose from among all those included within the range of the small dose action? This choice may be determined by reference:

1. To the drug, and its primary and subordinate actions, *i.e.* to the organs in which these actions take place.
2. To the disease, and its special nature and susceptibilities.

For a drug to be a medicine it must have two actions in different doses: the action of the small dose must be contrary to the action of the large dose.

This suggests the idea that for the virulent poisons—such as *snake venom*, *arsenic*, *opium*, &c., for which no antidotes are yet known, the best antidote *may* be very small doses of itself. The only opportunity I have yet had of putting this thought (an hypothesis in the useful sense) to a practical test is in respect to mercury. In a case of poisoning by this metal the third trituration of itself (the millionth part of a grain) was manifestly beneficial.

The region of drugs as poisons in health, and as remedies in disease has been taken possession of. It is in part characterised by this—the hurtful action of drugs in health is perturbative; the curative action in disease is silent and peaceful. This is the geographical outline. The details are much "*terra incognita*" within, which need to be explored.

I am not prepared to enter into the investigation of the action of what are now familiarly known as infinitesimal doses. This part of the region is still mysterious. To a certain class of minds this mystery is its chief attraction. The haziness of its atmosphere renders it to them the valley of the enchantress, which has charms for such minds irresistibly attractive.

But I will offer one observation.—The action of really infinitesimal doses appears to be the converse of the action of the doses we have been occupied with to-day—one which is inappreciable in health, but perturbative, and sometimes curative in disease.

My brethren, I ought to have concluded long ago. Suffer me to offer you my respectful thanks for your prolonged attention. If I have succeeded in carrying your minds along with mine, or if you shall hereafter be brought to view these objects in the light which has been attempted to be thrown upon them to-day, the time and attention will not have been unprofitably spent, and the day and the place will have become memorable to you. Farewell!

Since this Essay was written I have received the 42nd 'Report of the British Association for the Advancement of Science' for the meeting at Brighton last year (1872), which contains a 'Report on the antagonism between the action of active substances by Thos. R. Fraser, M.D., Secretary to the Committee consisting of Sir R. Christison, Bart., Dr. Laycock, and Dr. Fraser.'

In this Report the results of experiments on the antidotal power of *atropia* (the active principle of belladonna) over the poisonous action of *physostigma* (Calabar bean) in rabbits and dogs are given. These results offer a confirmation to a certain extent of the conclusions drawn in this address as to the varied action of different ranges of doses of drugs. These experimenters found the limits within which sulphate of atropia can prevent the fatal effects of a lethal dose of physostigma. 0.005 gr. was too small, but "any dose ranging from 0.015 gr. to 5.2 grs" was sufficient. When the dose of physostigma was larger than the lethal dose, *e.g.* when *twice* the minimum lethal dose, the range was from 0.021 to 3.2 grs. When *two and a half* times the minimum, from 0.025 to 2.2 grs. When *thrice* the minimum, from 0.06 to 1.2 grs. And when *three and a half* times, from 0.1 to 0.2 gr. "Successful antagonism could not be obtained above this dose."

The conclusion of the Report contains an important statement:—

"An eminent authority in pharmacology has recently published the statement that the only method whereby the injurious action of a poison, absorbed into the blood can be made to terminate is by the employment of such means as will cause or hasten the elimnation of the poison. This statement, fortunately, does not accurately describe our remedial resources. The existence of so undoubted an example of physiological antagonism as that between atropia and physostigma shows that the toxic influence of a morbific agent *may be directly opposed by a physiological antidote*, and that recovery may be produced by influencing the abnormal conditions themselves, in such a manner as to cause their return to a normal state."

I have also since read a Note in the *Appendix* to Dr. Dudgeon's Lectures, in which he endeavours to give the views of Dr. Altschul on the "posological rule." These may, or may not resemble mine; for Dr. Dudgeon says, "I am half inclined to doubt if I have apprehended him aright, for I find a little further on that he recommends small doses of a remedy he proved (*sumbul*) for the cure of conditions *precisely the opposite* of those the large doses produced on himself and fellow-provers. ...... What does he mean? Methinks, he has wandered by mistake into the homœopathic camp ...... and that he still belongs to the ranks of our opponents; at all events, I imagine the new school will not be anxious to claim him as an exponent of their doctrines, with his present confused ideas." I think it will be sufficient to add that my enquiries have been independently pursued, and in a different direction; and that Dr. Altschul advances hypotheses, while the statements given in this Essay are believed to be facts.—*The Monthly Homœopathic Review*, October 1, 1873.

We have to tender our best thanks to the Editors of the following Periodicals for regularly exchanging with us :—

The Indian Medical Gazette.
The British Journal of Homœopathy (H. Turner & Co., London).
The Monthly Homœopathic Review (H. Turner & Co., London).
The United States Medical and Surgical Journal.
The American Homœopathic Observer.
The Western Homœopathic Observer.

" *The Homœopathic Sun.*" (We have not received this Journal for a long time past).

The American Homœopathist.
The American Journal of Homœopathic Materia Medica.
The New England Medical Gazette.
El Criterio Medico (Madrid).
La Reforma Medica (Madrid).
La Homœopatia (Bogota).
(We have not received these for some time past.)

The Indo-European Correspondence.
The Hindoo Patriot.
The Bengalee.
The Indian Mirror.
The National Paper.
The Bengal Times (formerly *The Dacca News*).
Native Opinion (Bombay).
The Englishman : Saturday Evening Journal.
The Indian Daily News.
Mookerjee's Magazine. (New Series.)
The Bengal Magazine.
The People's Friend.
The Oudh Excelsior.
Sir William Jones's Works. (*Publishing in Series.*)
The Calcutta Excelsior.

The Soma Prakása (Bengali).
The Hálisahar Patriká (Bengali).
The Bám ibodhini Patriká (Bengali).
The Banga Darsan (Bengali).
The Amrita Bázár Patriká (Bengali).
The Samaj Darpan (Bengali).
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Rámáyanam : Devanagar Text with Bengali Translation (publishing in series).

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THE MATERIA MEDICA.

31.—Cicuta Virosa.

Nat. Ord.: Umbelliferæ.

Diagnosis. Cicuta virosa is apt to be mistaken for Conium maculatum. The stem of Cicuta is furrowed, that Conium is spotted. Cicuta virosa, though called water-hemlock, should not be confounded with the true water-hemlock, which is the Phellandrium aquaticum and belongs to the same natural order. Cicuta grows on the *border* of water, Phellandrium *in* water. The cicuta-root is characterized by cellular hollow spaces, which are well seen when the root is cut longitudinally.

Off. Part: All parts of the plant are poisonous. For homœopathic purposes, a tincture is made, as recommended by Hahnemann, from the juice of the fresh root gathered when the plant is in blossom.

Habitat: Borders of ditches and rivulets, swamps, meadows, ponds, lakes, &c., all over Germany, and the north and east of France.

Old School Uses: None, except what Hahneman has mentioned.

Pathological Anatomy.

In men.—Considerable injection of the diploë, from which a black fluid blood is discharged on sawing through the bone; a similar fluid is discovered in the *emissariis Santorini,* the inner table and the dura mater, which latter is of a reddish-blond appearance and is covered with a slimy coating, consisting of a blackish-fluid blood.

The meningeal arteries and all the vessels of the pia mater are congested with blood.

The blood-vessels are turgid with a blackish fluid blood.

Bloody points are discovered throughout the substance of the brain which is rather hard than soft; the choroid plexuses are uncommonly red; one of the ventricles contains a serous fluid.

A small quantity of a dark-red fluid at the base of the skull; a similar fluid flows out of the spinal canal.

Slight redness of the dura mater of the spinal marrow which discharges a serous liquid on being cut through, slight congestion of the vessels of the pia mater of the spinal marrow, which is somewhat more prominent in the lower portion of the posterior surface of the spinal marrow: the gray substance of the spinal marrow is darker than usual.

The surface of the tongue is very red posteriorly, that portion of the tongue is very much swollen and covered with very red papillæ.

Redness of the epiglottis and fauces.

The pharynx is bluish and dry interiorly.

Collapsed stomach; the mucous membrane of the stomach is red here and there, or covered with brownish spots almost throughout; after being effaced by rubbing, those spots leave a gangrenous appearance in the substance of the stomach; redness of the parts around the cardiac orifice and the pylorus.

The stomach and intestinal canal are distended with gas.

The upper and middle portion of the duodenum, including one half of the left portion, is constricted into the shape of a large musical string.

The spleen is softened and contains a good deal of blood.

Portions of the liver are pale, the border of the right lobe is somewhat inflamed, on the inner surface is a spot of two inches in size which is somewhat browner than the outer surface; the gall-bladder contains a reddish-brown or yellowish bile.

A quantity of blood in the kidneys.

Contracted, empty bladder.

A small quantity of serum in the abdominal cavity.

Redness of the larynx, trachea and bronchi, which cannot be washed off, and extends over the inner surface of these parts; the inner surface of the bronchi is lined with reddish mucus.

The lungs are dark-blue, bluish-red, and covered with yellow or vermilion-coloured spots, penetrating into the substance of the lungs to the distance of these lines; the lungs are very much distended, crepitating, and filled with a large quantity of dark-red, fluid blood.

The pulmonary veins and all the vessels in the chest are considerably distended.

The anterior surface of the pericardium adheres to the heart.

The heart and the venæ cavæ do not contain any blood.

The pleura is covered with a net of congested vessels.

Several ounces of serum in the right and left thoracic cavity.

The blood in the body is like a decomposed cruor containing only a small quantity of fibrin and possessing very little cohesion.

In animals.—The vessels of the brain are distended with a black fluid blood; a small quantity of serum in the ventricles of the brain; the vessels are filled with grumous blood.

Œsophagus and stomach are filled with frothy blood.

The stomach is very much contracted, with folds, and closed at the orifices; the mucous membrane is redder than in the natural condition.

At the base of the stomach it is dotted with livid-red spots; the serous membrane exhibits similar spots to those of the mucous membrane in the places corresponding to the latter; ulceration of the stomach; cancerous ulcerated little wart near the pylorus.

Congested liver.

The lesser intestines are shrivelled ; the intestines are empty, contracted, as if dried up ; the intestinal canal is lined with yellow mucus, the parts under which are inflamed, corroded, and sometimes gangrenous ; the rectum is lined with greenish mucus ; the rectum and cœcum are considerably inflamed.

Small, empty bladder with folds.

The trachea is full of froth.

The lungs are flaccid and inflamed externally ; the lungs are frequently infiltrated, full of blood, apparently inflamed.

Bloody serum in the pleura.

The ventricles of the heart are filled with blood which is at times fluid, at others coagulated or grumous.

Fluid blood in the veins.

Concordances.

Moral and intellectual faculties.—Anac. aur. bar. BELL. caust. cupr. hell. HYOSC. *lyc.* natr-mur. op. phosph. ph-ac. plat. PULS. rhus. sil. *stram.* sulph. veratr.

Seat of the diseases.—Anac. ang. *ars.* BELL. bry. calc. *camph.* cham. chin. cocc. *cupr.* cycl. dig. ferr. graph. hep. hyosc. IGNAT. *lyc. merc.* natr-mur. *n vom.* oleand. op. phosph. ph-ac. PULS. rhus. ruta. sabad. sec-corn. *sep.* sil. spig. stram. SULPH. thuj. *veratr.*

Morbid states and sensations.—Anac. *ang. arn.* ars. BELL. *bry. calc.* camph. carb-veg. CAUST. CHAM. *cocc.* con. CUPR. dros. graph. HYOSC. IGNAT. *ipec.* kali. lyc. *merc.* mezer. mosch. natr-mur. n-vom. oleand. *op.* petr. phosph. PLAT. plumb. ruta. SEC-CORN. SEP. sil. stann. STRAM. SULPH. *sulph-ac.* veratr. zinc.

Glands.—Arn. carb-an. con. sep.

Skin.—Ant-crud. bry. *calc. clem.* creos. DULC. GRAPH. hep. kali. lach. *lyc. merc.* natr. petr. phosph. puls. ran-bulb. RHUS. SEP. sil. *staph.* SULPH.

Sleep and dreams.—Bell. BRY. chin. ignat. lyc. N-VOM. phosph. PULS. rhus. *sulph.*

Pyrosis.—Rhus.

Time.—Ant-crud. *bell.* canth. ignat. *lyc.* nitr-ac. puls. selen. *sil.* staph. thuj.

Exacerbations.—*Acon.* amm-mur. *arn. ars.* aur. *bell. bry. calc.* carb-veg. caust. cham. cocc. colch. CON. croc. graph. HEP. ignat. ipec. *kali. lyc.* NATR-MUR. nitr-ac. n-mosch. N-VOM. phosph. puls. rhodod. RHUS. ruta. samb. *scill.* selen. *sep.* SIL. *spig. spong. stront.* sulph.

Concordances in general.—Anac. ang. arn. ars. BELL. BRY. *calc.* camph. caust. cham. *cocc.* con. *cupr.* dulc. *graph. hep. hyosc.* IGNAT. ipec. kali. LYC. *merc. natr-mur.* N-VOM. op. phosph. plat. PULS. RHUS. ruta. sec-corn. SEP. SIL. spig. staph. *stram.* SULPH. veratr.

Antidotes.—*Arn.* op. tabacum.

Hahnemann's Preface.

(Express the juice from the root of the plant when it begins to blossom, and mix it with equal parts of Alcohol.)

THE following list of symptoms of this drug, is very imperfect. I am confident that further provings of this drug will show that it corresponds to symptoms which no other agent is possessed of, and that it will even be a valuable remedy in chronic affections ; I have seen it act three weeks.

The old school has never employed Cicuta internally; several years ago, when Cicuta was prescribed, which was frequently the case, Conium maculatum was the drug designated as Cicuta.

Upon the recommendation of Linné the juice of Cicuta was employed in the so-called Cicuta plaster, especially by the *Danish Pharmacopœia*; this plaster was intended to cure arthritic pains.

The juice of the recent root (it has no effect whatever when dried) is so powerful that the old school practitioners could not venture upon giving it internally, owing to the magnitude of their doses.*

The 30th potency is sufficiently powerful to exhibit all the curative powers of that agent.

Pathogenetic Symptoms.

Mind:—

. He became indifferent to all things, and began to doubt whether he was really in the condition he was in.
. He confounded things of the present with those of the past.
. Thinking of the future made him feel anxious, and he was sad all the time.
. Suspicious.
5. Excited, and apprehensive about the future; he imagined that everything which might occur would be dangerous.
. He was sad when others were cheerful.
. He imagined he was not living in his usual condition and circumstances; everything appeared to him strange and almost terrible; he felt like one waking from an acute fever, and seeing all sorts of visions, but without feeling bodily sick.
. He felt like a child of 7 or 8 years, as if he were as fond of objects as a child is of his toys.
. Anxiety, he is sadly affected by sad tales.
10. Moaning and howling.
. Sadness for several days.
. Great tendency to start; opening the door, and hearing a (not very) loud word cause her to start, from which she has stitches in the left side of her head.
. Mania: after an unusual sleep her body felt hot; she jumped out of bed, danced, laughed, did all sorts of foolish things, drank much wine, jumped about, clapped her hands, and looked very red in her face.
. He disregarded mankind; he avoided their society, abhorred their follies, he seemed to hate men, and retired into solitude.
15. Want of confidence in men, and dread of men; he avoided their society, he remained alone, and reflected upon their errors and upon himself.
. Calm mind; he was cheerful and contented. (Curative effect.)

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* "Nec ulli auctor essem, ut interno usui dicaret." Murray. (Apparat. medicam. tom. I. edid. sec p. 402)

Sensorium:—

. Stupid and dull (after 10 m.).
. Stupid feeling in the head, with chills; at the same time the neck felt stiff, and the muscles too short.
. Loss of sense, absence of all thought.
20. Intoxication, staggering.
. Vertigo, when walking, as if he would fall forwards (after 72 h.).
. When stooping, his head feels as if it would fall forwards (after 80 h.).
. Vertigo, reeling.
. Reeling, and staggering when walking (after 82 h.).
25. He feels like one intoxicated when sitting, standing or walking (after 5 m.).
. All objects seem to him as if they moved in a circle, especially when sitting for many hours (after 2 h.).
. All objects seem to him moving to and fro, from one side to another, although every thing has its proper form (after 10 m.).
. He imagines she has to sit, or to place herself more firmly, because every thing she sees before her seems to vacillate, which induces her to believe that she is vacillating herself; every thing dazzles her (after 15 m.).
. She imagines she is vacillating from side to side, or that things around her move from side to side; the objects around her seem to her to move like a pendulum to and fro.
30. When she is to stand still, she desires to hold on to something, because the objects seem to her now to come nearer, now to recede.
. She reels and imagines she has to fall (after 6 h.).
. Vertigo, he fell down.
. He is constantly on the point of falling down.
. He fell down, without uttering one word.
35. He falls down and rolls about.

Head:—

. Hammering pain in the forehead, from morning till evening (after 2 h.).
. Anxiety in the head.
. The head feels stupefied and heavy (after 74 h.).
. Heaviness of the head, when sitting.
40. Compressive headache from both sides.
. Pressure in the left parietal bone.
. Stupefying headache externally, in the forehead, increasing when at rest (after 1, 36 h.).
. Formication in the forehead (after 2 m.).
. Stitching pain in the region of the frontal bone.
45. In the morning, when waking, headache, as if the brain were loose, and were shaken by walking; when reflecting on the real nature of the pain, it had disappeared.
. Megrim, a sort of aching rather externally.

. Violent headache in the occiput, resembling a dull pressure, and accompanied with some coryza (after 48 h.).

. Violent headache, for two days, after a sick feeling in the abdomen: stitching extending from the nose and the right eye to the occiput (after 15 d.).

. Headache is followed by a gloom lasting 2 days.

50. The headache went off when sitting erect.

. Headache, relieved by emission of flatulence.

Scalp:—

. Considerable eruption upon the hairy scalp and in the face.

Eyes:—

. Drawing stitches along the eyebrows (after 12 h.).

. A slight twitching under the lower eyelid, in the orbicularis muscle.

55. Heat and burning around the eyes.

. Eyes protruding.

. Staring look.

. Staring at one and the same place, every thing looking to him like black cloth (after 6 m.).

. Staring (after ½ h.).

60. She stares at one place for a quarter of an hour, and cannot do otherwise, although she makes an effort to do so; she is not quite possessed of her senses, and has to be stirred up a good deal, in order to answer correctly; when turning her head away with a sort of force, she loses her senses, and her sight becomes obscured.

. She is unable to distinguish an object correctly, however much she may stare at it; things looked blurred, as they do when looking too long and steadily at the same object.

. Although one may rouse her ever so much from her state of staring, nevertheless she relapses back again into the same state, the pulse being at fifty.

. If one leaves her sitting on a chair for some time, the head gradually sinks forward, whilst the eyes continually stare at the same point, so that the pupils, in proportion as the head inclines forward, get behind the upper eyelids; after which she feels a jerk internally, which brings her back to her senses for some time; after this she relapses again into a state of insensibility, from which she is roused from time to time by an internal shaking, which she declares to be a sort of chill.

. At times she saw things double and black; at times she became hard of hearing.

65. Contraction of the pupils after one and a half, two and a half hours; followed by consideraable dilatation of the pupils (after 8, 9 h.).

. Pressure in the right internal canthus; he had to close his eyes, to relieve them.

. (Nightly agglutination.)

. (Photophobia.)

Ears :--

. Sore pain behind the left ear.
70. Sore pain behind the left ear, as after a shock or blow.
. Pain behind the right ear, as would be felt after a blow or shock.
. Considerable eruption on the ears.
. Pimples below and in front of the ears, their tips being filled with pus, and painful like a boil.
. Detonation in the right ear when swallowing.
75- Roaring before both ears, worse in the room than in the open air.
. Loud tingling in the left ear.
. She does not hear well, unless one talks aloud into her ear, and she is made aware that some one is talking to her.
. Hæmorrhage from the ears.

Nose :—

. Sore pain of the right wing of the nose, as after a shock or blow.
80. (Scurfs in the nostrils.)

Face :—

. Pimples, of the size of lentils, in the whole face, (and on both hands,) causing a burning pain when coming out, afterwards becoming collected into one, dark-red, lasting nine days ; at the lapse of this period they peeled off, this process lasting three weeks. (I have cured chronic eruptions in the face, flowing together into one mass of pus, by means of one or two doses of a drop of the juice ; when one dose was not sufficient, I never gave the second till three or four weeks had elapsed.)
. Redness of countenance.
. Swelling of the face (and neck).
. Burning-itching vesicle on the left side of the upper lip, on the confines of the vermillion border.
85. (Thick, honey-colored scurf on the chin, upper lip and the lower portion of the cheek, with burning, soreness and oozing of the skin, accompanied with swelling of the submaxillary gland, scurfs in the nose, and insatiate appetite.)
. (Crusta lactea.)

Jaws and Teeth :—

. Lock-jaw.
. Grinding of the teeth.
. The mouth is full of foam.
90. Feeling of dryness in the mouth.
. Aching pain in the nerves of the lower row os teeth.
. Whitish sores on the border of the tongue, painful to the touch
. When talking, he utters the first five or six words without stuttering ; but after these he feels a small jerk in the head from before backwards, the motion being even perceptible by the eye ; this jerking of the head was accompanied by a jerking of the arms, which obliged him to cause the syllable which

he was about to utter, to re-enter the throat, as is the case in hiccough.
. Dumbness.

Pharynx and Œsophagus :—

95. Inability to swallow.
. The throat appears to be closed, and feels bruised externally when touching it, the pain increasing for several hours, with eructations from noon till evening.

Appetite and Gastric Symptoms :—

. What of appetite, owing to a feeling of dryness in the mouth; food has no bad, but not its full taste.
. Appeitite for dinner, but the appetite disappeared after swallowing one mouthful.
. He did not relish his breakfast, the food pressed in the abdomen, as if he had eaten already a good meal.
100. Continual hunger and appetite, even shortly after a meal.
. Great thirst (during the spasms).
. He had great desire for coal, and swallowed it.
. Hiccough.
. Hiccough, resounding at a distance.
105. Gulping up of a bitter, yellow fluid, when stooping, in the open air, from the stomach, and coming out at the mouth, after which she felt a burning in the œsophagus the whole forenoon.
. Sensation, as of waterbrash, out of the stomach; he felt qualmish, and hot all over, whilst a quantity of saliva flowed out of the mouth (after 9 to 13 h.).
. Nausea (after ½ h.).
. Nausea during a meal.
. In the morning, nausea, with lancinating headache.
110. Nausea and stitches in the forehead, the whole day.
. Vomiting.
. Vomiting, without removing the lock-jaw.
. (Vomiting, alternating with tonic spasms in the pectoral muscles and distortion of the eyes.)
. Pressure in the pit of the stomach, shortly after a meal, which obliges her to take a deep inspiration; accompanied with an inclination to eructation.
115. Cutting in the abdomen shortly after a meal.
. Colic and drowsiness, immediately after a meal.

Stomach :—

. Tightness in the pit of the stomach, and anxiety for 8 days; he he would like to walk out all the time, to get cool.
. Hæmatemesis.
. Burning and scraping sensation, from the throat to the region of the stomach.
120. Burning pressure at the stomach.
. Scraping, scratching sensation in the stomach.
. Shock in the præcordial region, as with a finger; it makes him start.

. Throbbing in the pit of the stomach, which had become raised to the size of a fist.
. Excessive throbbing in the pit of the stomach.
125. Stitching pain in the pit of the stomach.
. Anxiety about the pit of the stomach.

Abdomen :—
. In the morning, nausea in the abdomen; in the afternoon, after the nausea left, headache, a stitching in the right side of the head, extending from the right eye and nose, in both of which organs it was most violent, to the occiput, lasting three days, after the lapse of which time, the nose began to run and secreted a yellow mucus (after 9 d.).
. Heat in the abdomen (and chest).
. Rumbling in the abdomen (after ½ h.).
130. Considerable emission of flatulence.
. Accumulation of flatulence with anguish and ill-humor.
. Horrid colic.
. Colic from worms, with convulsions in children.
. Distension and painfulness of the abdomen.
135. Sensation in the right groin, as if an ulcer would burst (when sitting).

Stool :—
. Itching in the rectum, close above the anus; rubbing induced a burning pain; this pain always inducing a shuddering, after walking, when standing still, and during stool.
. Constipation.
. Diarrhœa.

Urinary Organs :—
. Retention of urine.
140. Difficult emission of urine, in the night.
. Involuntary emission of urine.
. Frequent desire to urinate.
. Copious micturition.
. The urine comes out with great force.
145. Sore, drawing pain under the penis as far as the glans, obliging one to urinate (after 12 h.).

Male Genital Organs :—
. Three pollutions in the night.
. Pollution, without any lascivious dreams.

Female Gen. Organs :—
. The menses are delayed (and scanty).

Cold, Catarrh :—
. Frequent sneezing, without croyza (after 29 h.).
150. Obstruction of the nose, accompanied with secretion of a profuse quantity of mucus.
. Yellow discharge from the nose.

Respiratory Organs and Chest :—
. Sensation in the chest and throat, as if something of the size of the first, and pressing the throat asunder, were lodged in them; it impedes respiration; worse when sitting than

when walking.

. Tightness in the chest, she is scarcely able to breathe the whole day (immediately).

. Want of breathing, the whole day (immediately).

155. A few prickings under the last false ribs of the left side, during inspiration and expiration; the stitches went off when standing or sitting (after 3 h.).

. Hoarseness.

. Cough, with a quantity of expectoration, especially in day-time.

. Burning arround the nipple (after 3 h.).

. Itching, and feeling of heat in the right side of the chest.

160. Heat in the chest and abdomen.

. Pressure at the lower end of the sternum, as after a shock, and as if sore, when walking.

. General heat, and especially heat in the chest, for three quarters of an hour, increased by smoking (to which he is used).

. A pulling in the outer parts of the chest, near the pit of the stomach (after 1 h.).

Back:—

. Tearing jerking in the os coccygis.

165. A shock in the dorsal vertebræ.

. Tension in the cervical muscles.

. When bending the head backward, she feels a sore tension in the muscles of the left side of the neck.

. Drawing pain in the left side of the neck (after 6 h.).

. Swollen neck.

170. Sort of opisthotonos of the head.

. Jerking of the head.

. Opisthotonos.

. Painful tension across the right scapula.

. Painful sensation on the inner surface of the scapula.

175. Sensation, as if there were an ulcer on the right scapula.

. Red vesicle upon the right scapula, painful to the touch.

. A kind of cramp in the cervical muscles; when looking around he is unable to turn the head back again immediately; the muscles do not yield, and he would suffer a good deal of pain if he were to use violence.

Upper Extremities:—

. Sore pain, as from a shock, in the right shoulder-joint.

. Painful sensation under the right arm.

180. Jerkings in the left shoulders (after 20 m.).

. Cracking sensation in the shoulder-joint, not audible.

. Tearing pain in the whole of the left arm, as far as the fingers.

. Her arm appears to her very heavy when raising it; this is accompanied by stitches in the shoulder, so violent that she cannot raise the arm to the head without exclaiming; she dares not even move her fingers.

. Sensation in the left arm, as if there were no strength in it, with lancinating pain in the arm when raising it.

185. Want of strength of the arms and fingers.

. Jerking in the left arm, which shakes the whole body (after 4 m.).
. Swelling on the inner side of the left elbow, as if an ulcer would form; when moving the arm a pain was felt in that part similar to what is felt when pressing against an ulcer.
. Frequent, involuntary jerking and twitching in the arms and fingers, the lower limbs and the head.
. Lancinations in the muscles of the right fore-arm, when writing; this disappeared when leaving the body entirely quiet (after 1¼ h.).
190. Sore pain in the left fore-arm, as if from a shock or blow.
. Distention of the veins of the hands.
. Cracking sensation in the wrist-joint, not audible.
. Pimples, of the size of lentils, on both hands, even the balls of the thumbs, causing a burning pain when first coming out, and afterwards flowing together into one, dark-red, and of nine days' duration.
. Contractive jerking of several fingers, and of the right thumb.
195. Deadness (numbness, coldness) of the fingers.

Lower Extremities:—

. A kind of sore pain in the right side of the pelvis, in the region of the border of the ilium, as is felt after a violent shock, drawing with pulse-like sensation.
. Frequent, involuntary jerking of the lower limbs.
. Burning stinging in the left femur.
. Painful feeling of stiffness and rigidity in the muscles of the lower limbs, which made walking impossible for three hours (after 1 h.).
200. When walking, the thighs experience a tearing pain and heaviness.
. Tearing pain in the thighs, immediately after rising from a seat, accompanied with soreness in the knees as if bruised; When walking the pain in the thighs increases to a deep-seated stiffness.
. Burning itching of the right thigh, which obliged him to scratch; this made it go off.
. Tingling under the skin of the thighs and legs, and especially the soles of the feet, as if the lower limbs would fall asleep, only when sitting, Visible tremor of one lower limb.
. Violent trembling of the left leg.
205. When waking, she does not set the foot down flat, the soles frequently turn inwards.
. Tearing around the knuckles of the left leg.
. Frequent prickings in the heel when sitting.
. Humming and moaning sensation in the left sole.
. Drawing-jerking pains in the toes.

Skin:—

210. Itching of the whole body, also burning, or inducing scratching.
. Intense burning of the skin.
. Suppurating eruptions (in the face), with yellow scurfs and

burning pain.

. Lentil-sized, dark-red pimples (in the face and on the hand), with burning pain when first coming out, flowing into one another afterwards.

Sleep :—

. Frequent yawning, as if he had not slept enough (after 1¾ h.).

215. Drowsiness, his eyes closed.

. Vivid dreams, which he was unable to recollect.

. Vivid dreams, at night, about the events of yesterday.

. Confused dreams, full of uneasiness.

. Sleeplessness, the whole night (immediately).

220. Sleeplessness, he woke every quarter of an hour, with a painful feeling of heaviness in the head.

. He feels every morning as if he had not slept enough.

. Frequent waking, with sweat all over, the sweating making him feel stronger.

Fever :—

. They want to sit near the stove.

. Thrills of coldness over the lower limbs; afterwards coldness in the arms; the coldness appearing to come out of the chest, followed by an increasing disposition to stare at one point.

225. Excessive heat of all the parts of the body, from the beginning of the action of the drug until its termination.

General Symptoms; Fits :—

. Trembling in the upper and lower limbs.

. Itching of the whole body.

. Crampy stiffness of the whole body, with coldness of the same.

. When lying in the bed, he feels as if the whole body were swollen, accompanied (while awake) with frequent startings as if he were falling out of bed (after 15 h.).

230. Catalepsy: the limbs were hanging down relaxed as they do in a dead person.

. The most violent tonic spasms, so that neither the curbed limbs could be straightened, nor the straight limbs curbed.

. The limbs are tossed to and fro.

. He tossed his limbs to and fro.

. Epileptic convulsions of three children, one of whom recovered.

235. Spasmodic contortions of the limbs, jerking him to the distance of two feet.

. General convulsions.

. Excessive convulsions.

. Epilepsy.

. Horrible epilepsy, returning first at short, afterwards at longer intervals; the limbs, head and upper part of the body are moved in a strange manner; accompanied by lock-jaw.

240. Epileptic fit with wonderful contortions of the limbs, the upper part of the body and head, with a bluish face and the breathing being interrupted for a few moments, with foam at the mouth; after the convulsions, when the breathing had

become free, he had lost his senses, he lay like one dead, remaining insensible even when called to, pinched, etc.

. (The body of a young man who died two hours after the poisoning, remained warm for a whole day, without blueness or swelling; the limbs were stiff, the lungs were full of blue and yellow spots, the blood was red and fluid, the heart empty, the œsophagus bluish and dry.)

. She lies like one dead, with lock-jaw.

. Immobility.

. They were all lying in a state of weakeness and insensibility, like dead persons.

[**Peculiarities**:—

Ailments from hearing bad news.
Ailments from Opium.
Remission, forenoon and evening.
Vertigo, inclining to fall forwards.
Skin hard, callous.
Pupils generally contracted.
Eyes generally sunken.
Ulcers with copious discharge.
Pred. worse indoors.
" " when opening the eyes.
" " when stooping.
" " when sitting bent forward.
" " when bending back the head.
" " when rising from a seat.
" " when lifting or resting diseased limb on anything.
" " when swallowing.
" " while and after eating.
" " from uncovering.
" " from cold.
" " from growing cold and in cold weather.
" " from motion.
" " while walking.
" " from exertion.
Almost always aggravated when assuming an erect posture.
Worse in the Fall.
Pred. better outdoors.
" " when closing the eyes.
" " when sitting erect.
" " after lying down.
" " in bed.
" " from warmth of bed.
" " when letting diseased limb hang down.
" " from wrapping up.
" " from warmth.
" " from growing warm and in warm air.
" " during rest.
" " from rubbing and scratching.—Gross's *Comp. Mat. Med.* by Hering.]

EDITOR'S NOTES.

PROPOSED REVIVAL OF CREMATION IN EUROPE.

We learn from the *Lancet* (Sep. 20) "that a club has been formed at Hamburgh for promoting the heathen practice of incineration, in place of Christian orthodox inhumation. The club already numbers upwards of eighty members, each of whom on entering has made a will, according to which his remains are to be burned." The *Lancet* admits that in a sanitary point of view cremation would be better than inhumation, but considers that the present is scarcely the time for reviving the ancient practice, as the price of wood and coal is very high, and consequently the expenses of the satisfactory destruction of a corpse would be considerable. Was it this consideration that led in ancient times to the substitution of inhumation for incineration?

INEQUALITY OF PUPILS IN UNILATERAL AFFECTIONS.

Dr. F. J. B. Roque has made some very interesting observations on the unequal contractibility and dilatability of the pupils in unilateral affections of the various parts of the body. Baillarger had shown that the pupil, in cases of general paralysis, was found dilated on the affected side. Dr. Roque has extended these observations and discovered the same condition in other diseases when affecting one side of the body only, such as pleurisy, pneumonia, &c. The difference is best seen when the pupils are dilated by belladonna or by electricity applied to the cilio-spinal region. For when the pupils are contracted under the stimulus of strong light the difference is hardly perceptible. Dr. Roque has further found that when two diseases are present on two sides, as for instance, phthisis on the one and pneumonia on the other, the pupil of the side of the most acute disease will dilate the most, and when two chronic affections are present on the opposite sides of the chest the pupil of the side on which the glands are affected will dilate the most.

FOREIGN BODIES IN THE FEMALE URETHRA, AND IN THE MALE BLADDER.

Mr. William Stokes, Professor of Surgery, Royal College of Surgeons, Ireland, has published in the *Dublin Journal of Medical Science* (Oct.) four cases of foreign bodies in the female urethra, which, in all the cases, were hair-pins, and one unique case in which an *entire* gum elastic catheter was found in the bladder of a laborer, aged 40. In this case there was stricture in two places, there were numerous false passages, and considerable induration, thickening, and matting of all the soft tissues of the perinæum,—all which circumstances necessitated an operation (the median one for lithotomy) for the removal of the foreign body. The history of this patient, as stated by himself, was "that for many years he had suffered from urethral stricture, and having learned the art of auto-catheterisation, was in the habit of frequently passing an instrument, and leaving it in for a considerable period. On the morning of the day of his admission he had done this, but, subsequently becoming intoxicated, he allowed the instrument to pass up into the bladder. Some hours subsequently, on coming to his senses he missed the instrument, and, fearing that it had passed in to the bladder, he came to hospital in a state of considerable excitement and alarm." Sir H. Thompson, whose experience is great in these matters, wrote to Mr. Stokes to say that he had never encountered a catheter to remove, though he had removed a part of stick of sealing-wax, which he did by the median operation.

Mr. Stokes thinks the above unique case proves "that the vermicular action in the urethra is, contrary to the commonly-received opinion, *towards*, and not *from*, the bladder."

A HEART WITH FIVE CAVITIES.

We take the following from the *Medical Times and Gazette* (September 20):—

On Tuesday evening, Mr. Langham held an inquest at the St. Margaret's Board-room, York-street, Westminster, on the body of Maria Smith, aged 30, who died under the following peculiar circumstances:—It appeared from the evidence that deceased, whose real name was Phillips, resided at 12, Union-court, Westminister. On Friday last, deceased, who had long complained of her heart, called a neighbour to her room, who, seeing deceased was evidently in a dying state, called for further assistance, and sent for a medical man, but before his arrival she exclaimed, "I am dying!" and fell on to her right side, dead. Mr. George Fenton, 28, Great Smith street, Westminster, remarked to the coroner that this was a case of peculiar interest, as there was only one other similar case recorded in medical annals known to him. On Friday he was called to see deceased, whom he had known by sight for about twelve months, and found her lying on the bed, warm but dead. He had since made a post-mortem. On examining the thorax he found the lungs slightly congested, and on separating the heart from the lungs he found the pericardium adherent over the whole surface. In carefully dissecting it off he found a most extraordinary formation—viz., five cavities. The extra-cavity was anterior to the left ventricle, and communicating with it by two small holes. One was just below the semilunar valves, and was tendinous all round, and smooth and shining; the other was more at the apex of the ventricle, rather larger than the superior one, and was covered with a valve somewhat similar to the other valves of the heart. The heart was in a most abnormal condition, being almost three times the ordinary size, weighing twenty-three ounces. There was a small fibrinous clot in the extra cavity, and the valves on the right side were inflamed and thickened. The liver was soft, and weighed one pound heavier than it ought to have done. The kidneys were small and much congested, and the capsule was very loose. No doubt the condition of the heart had caused death. The jury, after a few remarks, returned a verdict of death from natural causes. In a note received from Mr. Fenton, he adds "I have no doubt at some time or other it was a true aneurism of the heart, but the woman having had acute inflammation of both pericardium and endocardium, and the former, being adherent at the time the walls of the ventricle were ruptured, saved the life of the woman. I may further state that the size of the cavity was somewhat larger than the ventricle, and the anterior wall was wholly tendinous and smooth. Of course its inner wall would be the muscular wall of the left ventricle, and not so smooth, with the two holes communicating, the upper one being about the size of a quill, round, tendinous, and smooth ; the lower one somewhat larger and covered by the columnæ carneæ of the ventricle on one side, and the valve spoken of on the other. The capsules of both kidneys were non-adherent, and stood in the same relation to the kidneys as the pericardium does to the heart in a healthy state."

THE BRITISH HOMŒOPATHIC CONGRESS OF 1873.

YEAR after year, ever since the renewal of these congresses, we are being favoured with the advanced proof-sheets of their transactions, through the kind courtesy of Dr. Pope, one of the accomplished Editors of the *Monthly Homœopathic Review*, but the state of arrears into which, having in the midst of arduous professional duties to work single-handed, we have fallen, has hitherto prevented us from reciprocating the courtesy, by a prompt notice of these transactions which, as marking the progress of homœopathy in the British Isles, cannot fail to interest our readers. This time, we are determined, though so much out of date, to notice the doings of the last congress, the fourth since their revival.

Of the utility of these congresses there can be but one opinion. This utility was set forth by the late Professor Henderson, in opening the Edinburgh Congress, in language at once so elegant and eloquent, that we must quote it entire :

> "Gentlemen, I thank you cordially for having placed me in the chair on this occasion, for I esteem it a very great honour indeed to be called on to preside at the first Homœopathic Congress held in my native country. We have, I think, reason to congratulate ourselves that so many have been able to attend at this Congress ; and, I think, we have evidence of the interest taken in this subject in the circumstance of so many coming from distant parts of the country to be present amongst us. The institution of scientific associations, for the purpose of meeting periodically at different places, may be regarded as peculiar to this busy, enterprising age, and the purposes they serve are both important and manifold. If they do not actually plant the lamp of science where its light had been previously unknown, they at least refresh it with oil, and make it burn the brighter in the places they visit. They awaken a public inserest—a popular interest in the progress of useful knowledge, more than local, stationary, and more familiar societies usually do ; and by bringing together labourers from different parts of the fields of science and from different countries, they quicken the interchange of new truths, and enliven their devotion to their favourite studies by affording them opportunities of intercourse with persons of different tastes. These advantages are common to all such associations, but our advantage is peculiar to ourselves in the existing circumstances of our profession, and, indeed, of medical science itself. I have no intention either to deprecate the hostility of those who treat us with bitterness and misrepresentation, or of entering into any detail on the subject. I advert merely to that speciality in our own condition, which makes meetings like this peculiarly pleasant and profitable. Scattered as we are, each

in our own place, singly, or in small companies, over the three kingdoms, exposed everywhere to the treatment I have referred to, it is exceedingly encouraging and delightful to behold, as on this occasion, so many who maintain the same just principles—so many whose names are familiar to us as the defenders of those great truths, which we all know from experience to be by far the most important in the whole range of medicine. 'As iron sharpeneth iron, so does the countenance of a man that of his friend,' is a proverb the truth of which must be felt by all of us on an occasion like this. I feel satisfied that when this Congress is dispersed, each will return to the sphere of his arduous and responsible avocations with a zeal and a resolution strengthened by the opportunity he has had of personal intercourse with so many that hold the same great principles in medicine, and have the same experience as himself.

The actual practical results of these congresses will be evident from the following synopsis of their transactions :—

1st Congress held at Cheltenham, in September 1850. Chair taken by Dr. Willis on the first day of meeting, in his absence on the 2nd day, by Mr. Hering. An address was delivered by Dr. Black " On the Scientific and Ethical Condition of Homœopathy"; and the following papers were read—" On a New Mode of compiling and arranging the Materia Medica" by Dr. Drysdale; " On Uterine Diseases" by Dr. Madden.

2nd Congress held in London, in July 1851. Chair taken by Dr. Black. A paper was read by Dr. Ozanne " On Medical Ethics." Other papers would have been read, but the authors of the papers consented to withdraw them on this occasion for the purpose of affording the Congress to deliberate as to the best means of meeting the aggressive measures of the Edinburgh and St. Andrew's Universities. It was at this congress that an " Association for the protection of Homœopathic Students and Practitioners" was formed.

3rd Congress held in Edinburgh in September 1852. Chair taken by Professor Henderson. An address was delivered by Dr. Drysdale " On the Internal Developement of Homœopathy with especial reference to the use of Auxiliaries." A paper was read by Mr. Phillips " On the dose and the dilution."

4th Congress held in Manchester, in August 1853. Chair taken by Dr. Drysdale. The following papers were read—" On the Principles and Practice of Homœopathy" by Dr. Sharp; " On the Botanical Properties of the Bryonia" by Dr. Blake; " On the Physiological Effects of Naja Tripudians" by Dr.

Russel. An extempore address was delivered by Dr. Epps "On the best form of administering homœopathic remedies—in globule or in tincture," the doctor inclining to the former, and going so far as to say that the slowness of the progress of homœopathy in Manchester was "the fact that the successors to Dr. David had given up *globules* and had recourse to *tinctures*." It was at this Congress that a committee was formed to prepare a Homœopathic Pharmacopœia, composed of Drs. Atkin, Madden, and Black.

5th Congress was held at Leamington in August 1854. The subject of alternation of remedies was discussed.*

6th Congress held in 1855. A paper was read by Dr. Kidd "On Bright's Disease," and an Essay by Dr. Morgan "On Neuralgia."*

7th Congress was held in London in May 1856. Chair taken by Dr. Atkin. An address was delivered by Dr. Geddes Scott "On the possibility of discovering a law for the dilution," on which much discussion took place.

At this congress Birmingham was chosen to be the place of the next congress to be held in 1857. In the *Monthly Homœopathic Review* for May 1857 we find the following under the heading "Miscellaneous,"—"The *British Homœopathic Congress* having last year resolved that its annual meeting for the present year should be held in Birmingham, we have received from the gentlemen constituting the Birmingham Committee, a circular letter, in which they invite their homœopathic brethren to give their opinion as to the best month for the meeting of the congress, and to state their reasons for the selection of any particular month. This is a wise step. The convenience of the majority being attended to, a larger attendance is more likely to be ensured. Letters, in reply to the request of the committee, should be addressed to Joseph Lawrence, Esq., M. R. C. S., Hon. Sec., Colemore Road, Birmingham." The fact is, no congress was held till 1870. The reasons are not known. Hence we have spoken of the last congress, as the fourth since the *revival* of these gatherings. The following is the synopsis of the transactions of the first three revived congresses:—

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* We have not been able to gather much information regarding these congresses.

1st Revived Congress or 8th congress from the beginning, held in Birmingham in September 1870. Chair taken by Dr. Drysdale. It was at this congress that the chairman was for the first time called President, and the practice of electing the president of the ensuing congress was adopted. The address was delivered by the President, and the following papers were read;—"On the Action of Drugs" by Dr. Sharp; "On the study of the Materia Medica" by Dr. Madden; "On symptomatology" by Dr. Hayle; "On Acute Rheumatism" by Dr. Black.

2nd Revived congress held in Oxford in September 1871. President Dr. Madden. Chair taken by Dr. Drysdale in absence of the President who was ill. The President's Address "On the Relation of Therapeutics to Modern Physiology" was read by Dr. Hughes. The following papers were read:—"On Posology" by Dr. Black; "On Uterine and Ovarian Disease" by Dr. Moore; "On the influence of Homœopathy on the Practice of Surgery" by Dr. Dunn; "Reports of Surgical Cases" by Dr. Wynne Thomas.

3rd Revived Congress, held in York, in September 1872. President Dr. Black of Clifton. Address by the President "On the Attitude of the Medical Profession towards Specific Medicine." The following were the papers read:—"In what way is the Action of Drugs to be discovered" by Dr. Sharp; "On the Place and Value of Baptisia in Typhoid Fever" by Dr. Hughes; "On the Physiological Action of Serpent Venom by Dr, Pyburn read by Mr. Pope.

Having given a rapid sketch of the transactions of the congresses that preceded it, we come now to the one under immediate notice.

The *4th* Revived Congress was held on Thursday, the 11th September, at the Music Hall, Leamington, under the Presidency of Dr. Sharp, F. R. S., a gentleman who has done more than any other to popularise homœopathy and bring clearness and positivity into its domain. The Congress was opened by an address from the President, in which the subjects of the "Kind of Action of Drugs," the "Action of Small Doses," and the "Law for the Dose," were treated with a clearness of style and a cogency of argument, which may serve as models of philosophic language and philosophic reasoning. The whole

Address is so excellent that we shall give it entire in our next number.

Besides the address of the President the following papers were read and discussed upon:—

"On some forms of Phthisis Pulmonalis and their Special Treatment." By Dr. H. Nankivell.

"On Pyrexia." By Dr. G. Blake.

"On the Therapeutic part of the British Repertory." By Mr. Proctor.

In inviting the members to a discussion on the first paper, the President justly remarked that in his early days the term *phthisis* had been strictly and exclusively applied to tubercular disease, but that of late years it was used to indicate two kinds of phthisis, tubercular phthisis—the old and real "consumption"—and pneumonic or non-tubercular phthisis—inflammation of the lungs of an ordinary kind, but causing death. He did not object to the extension of the meaning of words, but he thought proper that when people resorted to such extensions, it was necessary to explain the reasons for so doing, and to define the limits of the extension. On the discussion which followed several members took part. Davos, Engadine valley, St Moritz and Exmouth, were mentioned as places, which persons displaying symptoms of phthisis, might resort to with great benefit; and Dr. Craig recommended—and in this opinion he was supported by Dr. Dudgeon—that if the disease was distinctly tubercular, the patient should be sent to spend the winter to the north—to places like Canada, or an Alpine valley, but in cases of non-tubercular lung diseases, when catarrhal condition is observed, a voyage to the south—to places like South California was the best thing. Two of the physicians remarked that in cases of chronic bronchitis and lung disease, they have noticed aggravation during the menstrual period.

As to medicine various remedies were suggested for different stages as well as different kinds of lung disease. In hæmorrhage Dr. Hayward found the first decimal trituration of *gallic acid* (two grains for a dose), and Dr. Sharp, the first trituration of *iron*, as very useful remedies. *Ledum* was also recommended. In non-tubercular cases or catarrhal conditions, *naphtha, iodide of potassium* and *sanguinaria* were mentioned by many as good remedies. Of the real homœopathic remedies, *bryonia* was recommended as the best, and of the unproved medicines, great praise was bestowed upon *iodide of arsenic, iodide of lime* and *arseniate of lime*. On the subject of change of climate, the President gave a most useful advice, namely, that if the patient was so far advanced in disease as not to be likely to recover, he had far better remain at home, with home comforts, than be sent away.

The paper on Pyrexia did not elicit much discussion. Drs. Blake and Hale stated that they had found *alcohol* given in large doses to have a tendency to lower the temperature of the body. Dr. Hughes stated that drugs like *baptisia, rhus* and *arsenic* produced true fever; and that in chronic poisoning by *arsenic* for instance, a state of fever of a wasting character was generally observed. He also thought that *aconite* was a true producer of pyrexia, and he cited a case in the Austrian provings of *aconite*, in which 'a gentleman became so feverish that not knowing the medicine he was proving, he resorted to *aconite* to relieve himself.' He gave it out as his opinion, however, that the primary effect of *aconite* was chill, but when there was reaction from that effect, a state more or less resembling true fever was produced, and that in one case of poisoning he had observed, the patient on the second or third day was in a state of high fever. Dr. Nankivell remarked however in reference to *aconite*, that he himself "took it in doses of from 1 to 30 drops of the mother tincture, but could never get his temperature above 100; and after giving up the *aconite* the feverish effect seemed to pass away after one or two copious night perspirations."

Dr. Blake was of opinion that in small doses, *aconite* at first caused an elevation of temperature and then a depression, then a further reaction and elevation, and that it was useless when the temperature was hyper-pyrexic.

The discussion on Mr. Proctor's views as to what should be the best plan on which to construct the Therapeutic Part of the Repertory, was rather of a desultory nature. Dr. Yeldham thought that in the present position of the dose question, it would be much better not to indicate any special dose. Dr. Hughes stated that this book should give only clinical inductions derived from experience, and that inductions derived from the Materia Medica should be omitted. As to the inclusion of non-homœopathic remedies opinions differed. Dr. Hughes did not see the desirableness of such a section in the Repertory at all, as a man practising homœopathy was free to use electricity and other non-homœopathic agents and could get his information from special works. Mr. Blackley and Dr. Gibbs Blake objected to the section as unnecessary. Mr. Clifton objected to it on the ground that it could not possibly give the whole needful information about the agents in question. On the other hand Dr. Yeldham thought the omission of the section in question would show their want of moral courage. "Great injury accrued to homœopathy from the practice of using certain expedients which were not homœopathic, and yet repudiating them in their works." Dr. Craig thought "it would bridge over the difficulty and distinction which separated them from other members of the profession if they plainly recognized that they did use in common with the modern medicine men a vast number of remedies which were the product of scientific education and sound physiological good sense." Dr. Drysdale in support of the section said that the publication of it "would tend to remove the misrepresentation to which they were perpetually subjected, namely, that they tried to get patients in the name of homœopathy and yet treated them in the common way." In closing this discussion, the President remarked that if the Repertory were put into the hands of young medical men, it would be a temptation to them to forget the homœopathic way of reasoning, and to substitute for it the merely empirical one of such a drug having done good in such and such a case previously. "Instead of thinking what on empirical grounds might do good, he had for the last 23 years been in the habit of thinking what would produce a similar condition to that in which he found the patient he was desirous of curing."

In addition to the papers above-mentioned, the annual report of the Hahnemann Publishing Society was read, in which it was stated in reference to the Materia Medica, that *belladonna* arranged by Dr. Hughes, was almost completed, and that *crotalus*, by Dr. Hayward; *naja*, by Dr. Pyburn; *sulphur*, by Dr. Cooper; *colocynth*, by Dr. Carfrae; and *conium*, by Dr. Brown, were in a forward state.

The dinner as a matter of course concluded the Congress, and was the occasion of fervid and eloquent speeches. We have space only for the concluding portion of the speech the President made in proposing the toast of the evening *par excellence*—"The Memory of Hahnemann":—

> The progress of human knowledge had been very slow, and medical knowledge had been no exception to this rule. For the first step we were indebted to Hippocrates. He laboured to separate medicine from philosophical hypotheses, and to teach us *to observe the symptoms* or signs of disease. His cases were simply descriptions of the course of disease—their natural history. He had been condemned by some moderns for giving us so little of his treatment. To him (Dr. Sharp) this seemed another evidence of his wisdom and modesty. His treatment was not founded upon a settled principle ; he had not confidence in it, and thought it better to let it disappear. The next step was to look at the structure of the body, and so to discover the seat of diseases—*anatomy*. This step was taken by the Alexandrian School, the only remaining representative of which was Galen. We learned from him the rudiments of anatomy, and we might also learn from him, though a heathen, a lesson in religion, for when he contemplated a skeleton he exclaimed : "Hic Dei manus videtur !" The third step was to observe the changes which were produced by disease in the structure of the various organs of the body—*pathology*. At the head of those who had taught us this knowledge stood Morgagni. The fourth step was to try to learn the functions and uses of the structure of the body—*physiology*. The leader of this research was Haller. The fifth step had been the study of the action of medicines- *therapeutics*. For the taking of this step in the right direction we were indebted to Hahnemann. He first experimented with medicines on a large scale in health, and by these experiments he was enabled to give us the first part of the law of healing by drugs- *similia similibus curantur*.

The next Congress and the next annual meeting of the Hahnemann Publishing Society, will take place in London, one Thursday in June 1874, the precise date to be determined by the Executive Committee and the British Homœopathic Society.

One concluding word, and we have done. The British Homœopathic Congress ought to be of a more representative character than it is. The Executive Committee ought to invite papers from all parts of the world,—wherever homœopathy has its professional votaries and the English language is spoken. The call, if made in due time, will, we are sure, be cheerfully responded to. The British Medical Association counts its members from all parts of the world, why should not the British Homœopathic Society and the British Homœopathic Congress do the same?

REVIEW.

A Manual of Fever for the Use of Students and Practitioners. By Hurro Nauth Roy, Graduate of the Medical College of Bengal. Wyman & Co. Calcutta. 1873.

THE function of the Reviewer may be described in one word to be to show the just merits of a work, to weigh the excellencies and deficiencies in the scale of impartiality, and to point them out. Considered in the abstract, this definition is accurate and has the recommendation of simplicity. But if we take into consideration that a reviewer has to deal with the productions of men of various tastes, temperaments and sensibilities, not to speak of abilities, &c., we must admit that his task is not so simple as the definition above given. It is much more comprehensive, and has many more sides than the definition appears to give to it. The reviewer must not only act the part of the enumerator, counting off the merits and demerits of a work, but he must act the part of the guard who has to shield both the public and authors. He must remember that on him may depend the influence which a work would exercise on the public mind and the public heart. He must remember that life is short, and he should therefore take care that worthless productions be not the cause of wastage of even that short space of time. On the other hand, he must bear in mind that no promising author is damped and paralysed through his carelessness. He must remember the fate of the poet Keats. Viewed in this light, the function of a reviewer resolves itself into a threefold duty :—duty to the public, duty to the author, and duty to literature, which last, we need hardly say, is synonymous with duty to posterity.

Books may be divided into two grand classes, according as they are original or mere compilations. The duty of the reviewer in reference to original works is in one sense very simple. If really original, he has to proclaim them as such, and the public ought to hail their appearance. For all real additions to knowledge, in whatever department it may be, ought to be hailed as so much territory gained in the domain of Nature by the intellect. In the case of compilations the task of the reviewer is much more difficult. He has to examine into the motive of the publication, expressed or understood; he has to judge whether the publication was demanded by actual necessity, or whether a healthy necessity could be created by it. For in either case the publication serves a useful purpose. After examining the motive, the reviewer has then to proceed to judge of the merits of the work, to see whether all available sources of information have been laid under contribution by the author, whether the materials thus gathered have been properly selected, condensed, arranged, &c. The rigor of criticism naturally must vary directly as the pretensions put forth by an author. If the pretensions are high, the reviewer must look sharp, and judge whether the merits of the work are proportionate to those pretensions.

We have deemed it necessary to make these preliminary observations before proceeding with the review of the little work before us. If the task of the reviewer in general is so difficult and delicate as we have described above, the task of a native reviewer of native productions is particularly so. The native intellect, after centuries of torpor, is just being roused into activity, and the reviewer, especially if he is himself a native, should so guard his pen as not to be in the way of that activity. He should, as much as possible, consistent with the fulfilment of his threefold duty above-mentioned, endeavour to encourage that activity. We can assure our author that it is in this spirit we have entered into a criticism of his production, and we are happy to see he himself appears to appreciate this spirit. For says he in the Preface, "It is a salutary maxim," especially in this book-making age, that no volume should be sent before the public without something beyond a private reason for its appearance." This is certainly very true, indeed, nothing could be truer. Solomon of old, at a time when the number of books compared to the number of the present day was infinitesimal, said "in much reading there is vexation of spirit." . We are, therefore, anxious to know the "something beyond a private reason," which has induced our author to send forth before the public this *Manual of Fever.* "My object," says he, "in presenting this little work to the public, with all its faults and imperfections, is, that in the present day the works on Fever are so numerous, and scattered through so many languages, that it is really inpossible for students preparing for examination, and for busy practitioners, who have neither time, nor opportunity to have access to all of them. I shall therefore consider my labors amply repaid, if I can succeed in supplying the want which is felt in this respect."

The want here spoken of is a real want, and whoever would meet it would certainly deserve well of the profession. Has the author, in this pamphlet of 90 pages octavo, which include the blank ones and the appendix, succeeded in his self-imposed task of bringing within easy reach of "students preparing for examination" and of "busy paretitioners" the substance of "works on Fever so numerous, and scattered through so many languages"? Has he, as this sentence implies, gone through these works in the original, and embodied their quintessence in the brochure he has presented to the public? The evidence of this scholarship however is to be seen nowhere except in the sentence quoted above from the Preface. " With reference to facts," says our author, " which have become the common property of the profession, I have not deemed it necessary to quote authorities." But when he comes forward to supply the want felt by the busy practitioner and by the student preparing for examination, he should at least once for all have mentioned the sources from which he has drawn. It is necessary for both classes of readers, for whose benefit the author has labored, that they should be assured that they are supplied with the soundest available information on the subject.

When one professes to supply a want felt by such a wide circle of readers, it is necessary that one should prove one's competency to the task one thus imposes upon oneself, a task by no means a light one, but, if rightly understood, attended with the gravest responsibility. The proof of competency must be more substantial than mere profession in the preface, which would not be unjustly looked upon as mere pretension. The proof of competency in question can only be grounded upon two essential conditions,—a large experience and varied scholarship. What evidence has our author given that he can legitimately lay claim to either? He himself says nothing of his own experience, and, as we have said above, all his scholarship seems to be concentrated in a single sentence where he only professes it.

We have examined this *Manual* from the beginning to the end, and we do not think there is to be found in it anything not to be found in the admirable compilations of Aitken and Tanner, which the student must read, and the busy practitioner must refer to. But does the *Manual* contain all the facts regarding fevers contained in these standard works? Far from it. The contents of the *Manual* are as meagre as it is possible to imagine, full of inaccuracies and short-comings. In fact, we can scarcely recall to mind a more glaring instance of audacious plagiarism, than this *Manual of Fever* by Babu Hurro Nauth Roy, and we only wonder how could Drs. Ewart and Smith stake their reputations by permitting the author to dedicate to them this wretched little monster of meagreness, inaccuracy and plagiarism. But more: the author thanks " Dr. Joseph Ewart, for the great care, kindness, and cordiality with which he has revised the proof-sheets during their passage through the press," and also renders his " warm acknowledgments" " to Dr. David B. Smith, for valuable assistance during the progress of the Manual." We certainly do not murmur at this expression of gratitude by our author, but we must say what we feel. These acknowledgments place us between the horns of a dilemma. We must either altogether disbelieve our author, or believe that Drs. Ewart and Smith must have winked at the serious deficiencies we have alluded to.

CLINICAL RECORD.

A Case of Severe Remittent Fever with Coma, Delirium and Jaundice. Recovery.

UNDER CARE OF DR. M. L. SIRCAR.

Babu G. C. D. aged about 60, and resident of Chakraber, Bhowanipore, was attacked with fever on the 1st August of the current year. The immediate cause of the fever could not be ascertained. For some time previously he was subject to occasional indigestion, and his health was in consequence somewhat impaired. During the day on the first day of the fever he was quite well. He began to feel somewhat uneasy in the evening, but, being an opium-eater, took his usual quantum of milk. On going to bed at about 10 p. m. he got strong fever, which continued unabated the whole night. In the night he had to go to stool twice, and as it was raining that day he got wetted. On the following morning (2nd Aug.) the fever somewhat remitted, but only to come on with greater intensity. The fever was accompanied by excessive thirst. From evening of this day the patient began to be unconscious and delirious. On the 3rd day the stupor and the delirium increased. This alarmed the family, and I was sent for on the 4th day. I saw him in the evening of Aug. 4. The patient did not appear to recognize me, though he knew me well. I noted the following symptoms :—Delirium, considerable depression, pulse very frequent, heat not considerable, tongue dry, and, as far as could be made out by candle-light, yellow tinge of the conjunctiva. Prescribed *Rhus t.* 6, ½ drop every 4 hours. Saw him again at 10½ a. m. of the following day (5th Aug.). Found him much improved ; he could recognize me, and there was hardly any delirium, the pulse was better. The jaundice was deep. Gave *Bryo.* 6., ¼ drop every 4 hours. In the evening report was brought to me that he was better in every respect, except that there was some tympanitic distension of the abdomen ; I therefore stopped all medicine for the night. On the 6th the report was that he was considerably better, so much so that it was not deemed necessary for me to see him. As he has had no stool for 6 days, I gave him *Nux v.* 6. On the 7th he was better still, though he had no stool as yet. On the night of the 9th the patient having had no stool for upwards of eight days, the family, under the advice of a neighbouring doctor, gave an injection of tepid water with some castor oil, which had the effect of bringing out scybalæ and thus clearing the rectum. The patient gradually recovered, and on the 15th day had his usual rice.

Remarks.

I have very seldom seen patients, especially at the age of this gentleman, recover from such a severe form of Remittent Fever, in which delirium and rapid prostration had set in from the second day of the disease. It was not simply the recovery, but the rapidity of the recovery, which astonished not only me but every body who saw the patient. The case demonstrated the powers of *Rhus Toxicodendron* and of *Bryonia Alba* in fevers of the low type which have become so prevalent of late in Bengal.

We may, in passing, make one observation in connection with this case, and this is, in reference to the much vexed question of "Auxiliaries." In the case under notice, the professional reader no doubt has noticed the administration of the injection of tepid water with castor oil followed by relief to the patient, and as far as could be judged, this procedure did not stand in the way of recovery, if, indeed, it did not accelerate it. The injection was given without my advice, and probably, if I had been asked, I would not have advised it. In many instances patients have recovered, though they did not pass any stool for such a length of time as from a week to three weeks. In some instances where the patients had become impatient to have a stool, I have seen the use of what are called "mild aperients" and even of simple tepid water enema followed by unpleasant disturbances, such as aggravation of the fever, diarrhœa, &c. I say in some instances, and not in all. Sometimes, though very rarely, the artificial evacuation of the bowels has led to the removal of the residue of the disease, if we may so call it, and thus has helped the progress of recovery. Under these circumstances it is not easy to decide this question of auxiliaries. All that we can lay down on the point is that they should never be had recourse to except under the most urgent circumstances.

A Case of Remittent Fever.

UNDER CARE OF BABU DOCOWRY GHOSH, L. M. S.

On the 5th of September last I was called to see the wife of Babu—, aged 31 years, suffering from fever for two days. She was naturally of a strong and sound constitution, and had generally enjoyed very good health. Recently having had to nurse her husband who was laid up with an attack of low remittent fever for about three weeks, she was somewhat exhausted. On the first day I saw her I found her in strong fever, attended with hot skin, great thirst, and slight remissions towards the morning. There was no congestion of the head or any other visceral complication. I gave her *Aco.* 6th, and plain sago for diet.

6th. Fever less this morning. Passed 2 or 3 scanty mucous stools with a little griping in the bowels.—*Cham.* 6th was given instead of *Aco.*

7th Sept. Fever stronger than yesterday. She has, however, passed a natural healthy stool this morning without any griping of the bowels. *Aconite* was resumed.

8th. No improvement of the fever. Complains of much headache, no redness of the eyes, bowels not moved since last report. Yesterday, instead of sending for *Aconite* (through negligence) they gave her the former medicine, *Cham.* To-day *Bellad.* 6th was given.

9th. No fever since last night, skin quite cool, no headache, no thirst, feels very weak. Medicine stopped.

Chicken broth, milk and sago were given.

At 5½ p.m. I saw her again and found her quite free from fever, the skin being cool and the tongue clean and moist. Urine clear, and free. Bowels not opened. No headache. Eyes dull and heavy but without any congestion. She had a vacant and dreamy sort of appearance, seemed to be listless of what was going on around her, but spoke sensibly when talked to. Last evening she had told her husband privately that she was afraid she was becoming mad, though she could not assign any reason for it. On enquiry I heard that a little before her illness she had a quarrel with some of the female members of the house and that she was very much unwilling to remain in that house. During her present illness she several times requested me to cure her soon, so that she might go to the native village of her husband. All these circumstances led me to think that the patient was suffering from a severe mental disquietude which might act most injuriously on her present debilitated constitution, and produce some nervous complaint such as hysteria. I explained this subject fully to her husband, and suggested that a speedy removal from the house was necessary for the quietude of her mind, and recovery of her health.

10th (7 a. m.) Slept pretty well last night, but she woke up two or three times in the night. No fever, skin cool, no headache, no congestion in the eyes. No inflammation in the system. Bowels not moved. Tongue clean and moist. Passes urine freely, took all the food that was given her yesterday. Her mind, however, is more out of order this morning. Answers with great difficulty, vacantly stares at when questioned. Has got the same dull and dreamy appearance as yesterday. Has thrown off all the ornaments that were on her person. Alternately puts on, and throws down with violence the iron bracelet on the left wrist, the sign of married life in a Hindu female. At times she talks incoherently, and at others tries to walk out of the room. Has had no hysteric fit, convulsions, nor complete loss of sense. This morning I gave *Nux v.* 6th to relieve the bowels, and ordered her to be bathed with cold water. Her removal, as settled last evening, was in the course of the night postponed by her husband on the ground of her weakness, and a letter was written to her father aksing him to come down, and take her with him.

At noon I was twice sent for within an hour to see her, as she had become unmanageable. On calling at 1 p. m., I was astonished to see her held down by 3 or 4 persons, one holding the arms, one holding her legs, and another sitting by the side with one knee pressing against her breast. Notwithstanding all this use of force, the patient was struggling to get up, tossing her head from side to side, forcibly protruding her tongue, crying aloud at times to let go her limbs.

The skin was cool and moist, eyes rolling but not congested. Pulse slow and feeble; does not answer questions. No convulsive starting of the limbs. Bowels not yet moved. Has passed urine in her clothes during the struggle; forcibly squeezing the eyes. No delirium. On enquiry I was told that at 8 a. m. she was bathed with 4 or 5 *gharras* of cold water, while standing, for they could not make her sit down even with force. About 2 hours after the bath she remained in a quiet state, and during this interval she took medicine, and a little cooling drink. But since 10 o'clock she has become unmanageable, throwing away all food and medicine, trying to get out of the windows, breaking open doors, injuring things in the room, squeezing the eyes hard. During this agitation she several times pressed her hand over the genital region, and screamed out as if with pain. But on examination nothing wrong was found in that part.

On hearing all this and watching the patient for a few minutes, I was much alarmed and immediately sent for some brandy, and chicken broth, and wrote to Dr.—for consultation. In the mean time I dashed some cold water on the face of the patient, and she became quiet and sensible. Her countenance became pale and her limbs, now released, became jactitating. In fact, she was extremely prostrated. She then drank a little water for the first time after her becoming furious at 10 a. m. A few minutes after she sat up, had her cloth changed, put on the usual veil over her head with shaking hands, and took a cupful of milk. As she was very weak, she was allowed to lie down. While she was thus lying down she asked two or three times a widowed relative who was sitting by her, whether she had taken rice that day or was it her fasting day, *Ekâ-lasi.* This female thinking the patient to be not in her senses remained silent for a while, and then asked the patient if *she* would like to take some rice. On answering in the affirmative, some rice was brought to her. As she would not take rice before me, I left the room. About 8 or 10 minutes after, Dr.—called in, and after hearing a short account of the case, went into the room with me and the husband, who was just going out to office. On entering the room we were at once thunderstruck to find the patient sitting up with a quantity of rice in her mouth, which she was masticating, though in a state of collapse, pulseless, and dying! She was immediately made to lie down, the rice was taken out her mouth, and brandy was freely administered. But alas to no effect! she drank a few doses of brandy and then quietly expired within 10 minutes of our arrival and at about 2 p. m. While we were giving brandy the pupils were found to be very considerably dilated.

Remarks.

The cause of death in this case is not easy to make out. The patient, a young woman, was in the enjoyment of very good health a week before her death, and suffered only for five days from an attack of remittent fever which was neither very ardent nor very low. Her bowels were loose only for two days, the 5th and 6th Sept. And from the evening of the 8th to her death at 2 p. m. of the 10th Sept., that is, during the last 44 hours, she was *perfectly free from fever.* Neither had she any inflammation in her system during the whole period of her illness. Did she die of effusion in the brain as it often happens in cases of virulent malarious fever where death takes away the patient so suddenly? But could there have been effusion into the brain where consciousness was retained even up to the last moment. For in this case the patient sat up, changed her cloth, and took a cupful of milk 20 minutes before her death, and 10 minutes before that she had spoken quite sensibly to a relative sitting before her, and then sat up to take rice. Besides what produced the listless and dreamy state of her mind on the 9th and extreme agitation like that of hysteric females on the 10th? Did hysteria really attack her, which it never did in her life? Has hysteria ever proved fatal so rapidly?

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Gleanings from Contemporary Literature.

POSOLOGY, IN RELATION TO FOOD-DRUGS AND MEDICINE-DRUGS.

By W. B. A. SCOTT, M.D. Edin.

OUR object in writing the ensuing pages is not to maintain any defence of the homœopathic law,—a long task, and now needless, since it is so fully although tacitly admitted in the leading medical works of the present day, especially in a deservedly eminent manual of therapeutics which has lately reached its third edition ; it is not even to do battle on behalf of the reality of the action of infinitesimal doses, since this is a matter not of argument but of practical demonstration, of the truth of which any one may satisfy himself by a month's trial ; but we are desirous of giving some reply to those who reproach us with deserting our own principle, because they have observed that we sometimes administer drugs in other than infinitesimal doses.

In the first place we have to make the very obvious remark, that those who bring this reproach against us understand neither what they say, nor whereof they affirm. The doctrine of infinitesimal doses is no more the "principle" of homœopathy as distinguished from allopathy than the doctrine of the lawfulness of eating pork is the "principle" of Christianity as opposed to Mohammedanism. But let this pass. To take exception to all the technical and formal blunders in our opponent's indictments would be endless. Even to correct their spelling would be no small undertaking. One scholarly critic, for instance, objects to what he calls "Hahnemannism." Another has no belief in "infinitesimall* doses. And a third, apparently ignorant of the fact that the difference between *homos* and *homoios* once divided Christendom, makes a terrible assault on the principles of "Homœopathy !" Squire Thornhill declined to furnish Moses with "arguments as well as answers." We shall act more generously towards our opponents, and correct their indictment for them, since they seem incapable of doing so for themselves. The charge will then run thus : that "whereas the "founder of the homœopathic school taught that medicines, adminstered "according to the law of homœopathy, should, after due dynamization, "be given in infinitesimal doses, we, his followers, have, traitorously and "wickedly, and not having the fear of Hahnemann or of the reproach of "inconsistency before our eyes, in many cases administered certain drugs "in appreciable quantities." To this fearful accusation, we think, a complete answer can be given.

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* It has been pointed out to the writer of this article that in the work to which he refers this word is written "infinitesimal," so that it might at first sight appear as if the letter "i" had been omitted by a printer's blunder ; this excuse, however, will not hold good, as the word occurs repeatedly, but is always spelled in the same way.

Drugs may be divided into two principal classes: those which are given as food, and those which are given as medicine. To some it may appear strange to speak of the administration of drugs as food, but the phrase is not our own, and must be familiar to all those who are acquainted with the writings of Professor Hughes Bennett on the use of cod-liver oil in phthisis. Also, there is a wonderful hotch-potch of all manner of ingredients which goes by the ridiculous name of "*chemical* food," so that our language need call forth no criticism on the score of novelty. Now, the use of food-drugs—or "analeptics" if that term is preferred—is to supply directly some element or proximate principle which is at the time morbidly deficient in the system, and to supply it in such a form as may be most easily assimilated. This ready assimilation is the object sought to be attained by the administration of a drug in such cases at all, because the ordinary articles of diet really contain all the principles necessary for the due nutrition of the body; but in a weakened state of the digestion, or disordered condition of the secretory and excretory function, it is quite possible that the digestive powers may be unequal to the task of culling out some individual necessary nutritive element from the mass with which it is incorporated, and, accordingly, we then administer this element itself in a form in which it may more readily be taken up—as in the case of cod-liver oil above referred to. Another example is afforded by iron. In many cases of anæmia, or rather spanæmia, arising from some depressing cause, as improper food, &c., and not from antecedent or concurrent constitutional disease, where the blood is pale in colour and poor in quality, (though not always deficient in quantity, as the first of the above names might have led us to expect); or in cases where this symptom remains during convalescence after exhausting diseases (always supposing the disease itself first completely removed); we may, and often do, with great propriety, order our patients to try some chalybeate waters, or else administer appreciable doses of some salt of iron, such as the citrate of iron and ammonia. This method of employing cod-liver oil and ferruginous salts affords a very good example of the true use of food-drugs, in which it is at once seen that the doses must be appreciable; and, when given on this "analeptic" principle, it would manifestly be as absurd to have recourse to infinitesimal doses, as it would be to expect to keep a labouring man in good condition on one globule of the thirtieth trituration of wheat flour, with half a drop of the two hundredth centesimal dilution of milk—a flairée of each to be taken on alternate mornings.

To this "analeptic" treatment, therefore, the doctrines of Hahnemann respecting infinitesimal doses hav no reference whatever—and, indeed, *could* have none, unless in the spirit of prophecy, as it is a method which has been introduced since his time, and we are indebted for its elucidation mainly to the labours of Professor Hughes Bennett. But it is widely different in the case of medicine-drugs. Here we are in many cases administering a substance which forms no normal constituent of the body; we administer it for the sake neither of its nutritive, chemical, nor mechanical properties, but as an "alterative" strictly so called, that is to say, in order to produce some dynamic or vital change in the system. In remote country districts, indeed, a few adherents of the "chemical" school may perhaps still be found, who administer alkalies for the cure of gastric acidity, but after the publications of Dr. Sydney Ringer such hardly deserve notice, and the invariably aggravated sufferings of their patients furnish ample proof of the futility of their practice. In fact, we know that the chemical and physical action of many drugs, so far from being desirable for their own sakes, materially interfere with that vital or dynamic action which we seek to obtain. For this and other reasons, we endeavour to reduce to a minimum the actual amount of the drug given, and, in order that the specific action of the medicine may not be lost by the diminution of the dose, we increase its dynamic power by means of those triturations or succussions which have been found so effectual for this purpose—instituting careful experiments in order to determine how far these processes may be carried in each case. Here we find the "law of infinitesimal doses," as it has been called, to hold good, and this is the department of the subject which Hahnemann proposed to embrace in his most characteristic teaching as it is the action of medicine-drugs, or "alteratives" alone which falls under the head of pharmacodynamics, properly so called; the properties of "analeptics" may, with greater propriety, be considered as a branch of dietetics or regimen.

It is of course, often extremely difficult, in individual cases, to determine whether the "analeptic" or the "alterative" ~~treatment~~ is to be adopted; and it is impossible to lay down any general rule which shall always be found of easy application. There is, however, one distinction which prevails universally; when the malady consists in the deficiency of some principle normally present, such deficiency arising from some accidental cause, and not from constitutional disease, and when this deficiency has so far weakened the digestive organs as to render them incapable of extracting the principle from ordinary articles of diet, *then* we may hope for the best results from "analeptic" treatment; but in all cases of primary constitutional disease, even should this have led to defective assimilation, and consequent deficiency of some principle, we must first have recourse to the "alterative" or strictly medicinal treatment in order to remove the "*fons et origo mali*," even if it should be necessary subsequently to follow this up with an "analeptic" course during convalescence. This rule at first sight appears simple enough, but we all know how hard it is to disintguish with certainty in practice between cause and effect, and, therefore, to decide which line of treatment we ought to have recourse to in any particular case. Also, a long continued deficiency of some proximate principle, arising at first from some accidental cause, may give rise to constitutional disease, which, although a SEQUELA in point of the time of its appearance, may yet in treatment require to be removed before proceeding to attack its antecedent. On the other hand, a constitutional disease THUS SET UP, is sometimes *kept up* as well as originated by such deficiency, and will depart spontaneously on the deficiency being supplied. So there are many difficulties in the practical application of the rule.

It is worthy of remark, that sometimes a really valuble drug has fallen into disrepute, on account of this distinction between "analeptics" and "alteratives" having been overlooked. It occasionally (though not, we think, very often) happens that the "alterative" suited to the treatment of a disease characterized by deficiency of some normal constituent of the system, is itself the very substance, or a component part of the substance, thus deficient, and hence identical with the "analeptic". For example: *phos. ac.* and *phos. calc.* are extremely useful when given as "alteratives" in the treatment of rickets. Now, phosphate of lime is the substance which is here deficient in the osseous system. And because the free ("analeptic") administration of the "syrup of the phosphates" was sometimes found effectual in this disease, it was rashly concluded by some that it was the "analeptic" action of these substances which was to be sought. As we all know, the "alterative" or dynamic action of a drug is SOMETIMES obtained even from its "analeptic" administration—a most fortunate circumstance, or the "regular" school, as it is pleased to call itself, would never have effected a single cure from the days of Machaon and Podalirius down to this year of grace 1873. However, the numerous instances in which the "syrup of the phosphates" failed to cure rickets (far more numerous than those in which it succeeded), shewed that it could not be trusted as an "analeptic" in such cases, and this at one time led to the abandonment of phosphates in any form in the treatment of this disease. But we now know that administered as an "alterative," in the form of pilule or globule, *phos. ac.* or *phos. calc.* is usually found extremely useful. And, indeed, had sufficient attention been paid to all the phenomena occurring in rickets, and due regard been had to the fact that in this disease there is an enormous elimination of earthy phosphates by the urine, we might have seen at once that this morbid action of the emunctories would require to be corrected before any good effect could reasonably be anticipated from "analeptic" treatment. In fact, it may be added as a sort of rider to the rule we have laid down, that whenever the deficiency of any element or proximate principle normally present is due to excessive excretion of the same, the directly "analeptic" treatment can find no place, at least in the first instance. The benefit which really seems to have accrued from the *ab initio* use of the "syrup of the phosphates" in some cases of rickets is, accordingly, to be ascribed to the "alterative" and not to the "analeptic" action of the drug, at first at any rate, and would, therefore, have been more speedily and more certainly obtained by employing a properly dynamized preparation of *phos. ac.* or *phos. calc.* according as the peculiar symptoms of each particular case seemed to demand the one or the other drug.

Hence we see that the charge of inconsistency brought against us for sometimes employing infinitesimal and at other times appreciable doses, arises solely from the distinction between "analeptics" and "alteratives" having been overlooked. We remember to have read somewhere or other the remark that the difference between foods, medicines and poisons is simply one of degree and not of kind. This sapient observation seems exactly to express the doctrines of our accusers; and, until they shall have paid some slight attention to the elements of dietetics and pharmacodynamics, it is useless to argue further with them. But all those who are aware of the fact which we should have thought sufficiently obvious, viz.: that a food is one thing and a medicine another, must see that in the diversities in the methods of treatment we have been discussing, we are neither guilty of any inconsistency with our own principles, nor any dereliction from the doctrines of Hahnemann.—*The Monthly Homœopathic Review*, September 1873.

VERIFIED SYMPTOMS.

By H. Noah Martin, M. D.

(Read before the Homœopathic Medical Society of Pennsylvania.)

Aconitum nap. Great tingling sensation and sensitive feeling of the nerves of the left arm and of the whole left side of the body, occuring after standing in a draft of cold air; cured in an old man who was paralytic in the left side, with the 1000th potency (Tafel). Foundry-men, who work in hot furnaces and frequently "cool off" in the open air, are subject to cranial neuralgia and cerebral congestion. These affections are speedily relieved with aconite high.

Ten drops of the pure tincture of Aconite in a tumbler half-full of water proves nearly specific in ordinary forms of cholera morbus. A tea-spoonful every half hour, or oftener, according to the urgency of the symptoms.

Agaricus musc. Chillblains and burning itching bunions have been almost uniformly cured. I remember of but one failure in a large number of cases. A single dose of the 200th, dry, on the tongue, usually ameliorates the condition within twenty-four hours, and a speedy cure follows.

Aloes. Nearly specific for dysenteric diarrhœa, with sensation as if the rectum were full of water, which gushes out at the least effort to pass flatus. One case, in which the patient passed a quantity of black fluid blood, was relieved immediately with one dose of Aloes high.

Antimonium crud. A child had marasmus, emaciated to a skeleton. The symptom deciding the remedy was, *great crossness when touched or looked at*, which was unusual when in health. An allopathic physician promised to practice homœopathy and renounce allopathy, if this child were cured by homœopathic medicine. A promise never fulfilled, though he could not deny the cure. One dose, high, was all that was necessary. The mother had a troublesome corn on the bottom of one foot, which disappeared under one dose of Antimonium crud. high.

A true case of dry gangrene of the toe was cured with this medicine, given in the 6th and 30th potencies, in alternation. More than thirty years later the patient died of the same affection.

Apis. This medicine, given in the third decimal dilution, will speedily cure nearly every case of diphtheria in the early stage. It has not failed in a single instance during the past three months, although prescribed in a large number of cases.

In acute synovitis of the knee, if the pains are most violent at night, *without thirst*, it has shown marvellous power when given in the 1000th potency (Tafel).

Anacardium. Has proved one of our most valuable medicines for dyspepsia. Many cases which have resisted the efforts of other physicians, I have cured with this agent. It stands between Nux vom. and Lycopodium. "*The symptoms disappear while eating, and return again in two hours*," is a reliable symptom, and I have corroborated it in not less than ten cases. During my clinic at the Hahnemann Medical College of Philadelphia, last winter, a case of inveterate dyspepsia was cured by this medicine, (Tafel's 1000th). The characteristic indication above given was present in this patient's case.

It has proved of value in morning sickness of pregnancy.

Argentum metallicum. In too profuse flow of pale urine, causing the patient to rise frequently at night, no other medicine has proved so generally useful.

Arnica. This medicine stands among the first in value for coughs dependent upon cardiac lesion. The cough is paroxysmal in character, occurs at night and during sleep, *without awaking* the patient.

For angina-pectoris it is one of our best agents. The patient complains of sudden cardiac pain with sensation as if the heart were tightly grasped by a band. The pain extends in the direction of the liver, and upward through the left pectoral region, and down the left arm. The pain is especially severe in the elbow of the left arm.

I have found the most benefit from the use of the tincture ; in heart affections ten drops in a tumbler half full of water, a teasponful every few minutes or hours, according to the urgency of the case ; while in whooping-cough and typhoid fever, I have had the best result from the high potencies.

Arsenicum Iodatum. The Iodide of Arsenic is my reliance in acute swellings of the axillary and inguinal glands, and sometimes, when the submaxillary glands are swollen and threaten to suppurate. Even after the peculiar throbbing pains have set in, which seem to indicate the establishment of the suppurative process, I have known this agent to speedily disperse and reduce the swelling. It excels all other medicines for the rapid cure of venereal bubo. I feel certain that this statement is not too strongly emphasized. I use it in the second or third decimal trituration.

Arsenicum album. During the death throes of consumption, when the patient is agonized with extreme restlessness and difficulty of breathing, a single dose of the 1000th potency (Jenichen), exerts an almost magical power in giving quiet and ease to the last moments of life.

Indolent ulcers upon the tibia with bloody ichorous discharge, corrosive burning, and a reddish-brown appearance far around the ulcer, are cured by Arsenic high.

In gastric fevers, when cold water is not tolerated by the stomach, or the stomach feels as if filled with cold water, this medicine is my chief reliance. In such cases we frequently find the characteristic arsenic pain after eating, with immediate expulsion from the rectum of a dark-colored, watery, offensive fluid, mingled with undigested food. Arsenic high answers all our expectations here.—*The Hahnemannian Monthly*, August 1873.

We have to tender our best thanks to the Editors of the following Periodicals for regularly exchanging with us :—

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OF

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THE MATERIA MEDICA.

30. CHINA (CINCHONA).

(Concluded from p. 286).

Lower Extremities:

735. When sitting, pressure in the fleshy part over the os coccygis, which increases, feeling like a pulse, and going off when rising.

. Tearing drawing in the left glutei muscles, when sitting.

. Drawing in the glutei muscles and knees at the same time, when standing, going off when sitting.

. Pain, a sort of stinging and burning, simulaneously in different places of the lower limbs.

. Weakness and weariness as after a distant journey on foot, in the thighs and legs.

740. Weakness and want of firmness in the hip and knee-joints, two mornings in succession, as if he had made a distant journey on foot the day previous; by continued exercise this feeling disappears from the joints, and is succeeded by a feeling as if bruised, which is felt in the thighs the next and in the legs the third day.

. Weakness in the lower limbs, when walking, the whole day.

. Painful drawing along the outer parts of the long bones of the lower limbs (after 2 d.).

. The lower limbs go to sleep when sitting.

. The posterior muscles of the thigh feel bruised, when sitting.

745. Tension when walking, in the anterior muscles of both thighs.

. Tearing in the thigh, in jerks.

. Weakness in the thighs.

. Burning in the anterior and superior parts of the thighs.

. Hard swelling of the thighs, extending sometimes beyond the knees as far as the feet, becoming thinner towards its termination, reddish, and painful when touched.

750. Cramp-like (stitch-like) drawing in the thigh and leg (after ½ h.).

. Drawing, with pressure, in the hip and knee-joints, disappearing when walking or standing.

. Pain in the hip-joint, in the knee and foot, as if they were sprained or cut to pieces.

. Drawing pain in the outer parts of the femora, as if the periosteum were being scraped with a dull knife.

. Slow, painful drawing in the inner side of the left thigh, which does not seem to affect the parts behind the skin.

755. Cramp-like drawing in the right thigh, commencing at the bend of the knee, (with sensation of pressure) as if the leg should be drawn up, in the evening when sitting, going off by standing and walking.

. Jerking in the middle of the left thigh (after 5 h.).

. Jerking tearing in the outer parts of the right and left thigh, towards the anterior and external parts, excited only by contact, not by motion.

. Jerking tearing in the anterior part of the left thigh (after 2 h.).

. Tearing in the femora, from above downwards, when at rest and in motion, in paroxysms, for several days (after 72 h.).

760. Tearing, extending from the knee-joint into the thigh, accompanied with weakness which makes walking and standing difficult.

. Painful drawing in the femur, from above downwards, with pressure, mostly when sitting, in the afternoon.

. Painful sensitiveness of the skin of the thighs, when rubbing the clothes against it, as if the skin were rough and covered with pimples (after 8 d.).

. Sensation in the left thigh, when standing, as if a hard nodosity were in the flesh, affected with a drawing pain (after 2 h.).

. Stitch in the posterior part of the right thigh from below upwards, when standing.

765. When rising from a seat, burning and tingling in the thigh upon which he was sitting, as if it had gone to sleep, especially in the bend of the knee, and particularly felt when standing.

. Cramp-like, paralytic pain in the right thigh and the knee-joint, when rising from a seat after having been sitting for some time, and when walking (after 5½ h.).

. Jerking tearing, within the patella.

. Paralytic tearing in the right knee-joint, extending now towards the thigh, now towards the leg, with faintness of the part, and increased more by contact than by motion.

. Sharp drawing pain in the right knee, when rising from a seat and when walking, going off again when sitting (in the afternoon).

770. Stitches in the left knee-joint.

. Slight trembling of the knees when rising from a seat, disappearing while walking.

. Sudden bending of the knees, especially when going up stairs.

. Sudden bending of the knees when walking.

. Coldness and chilliness of the knees.

775. Darting pain in the knees.

. Hot swelling of the right knee, with drawing, tearing pains, which rouse him from sleep during night.

. Pain in the knee when moving it ever so little, as if bruised.

. Pain in the knee when bending it, preventing sleep, with nodosities under the skin.

. Pain on the side of the patella, when touching it.

780. Jerking drawing in the tendons of the hamstrings, synchronous with the pulse.

. An uneasiness in the legs obliged him to curb them, and to draw them up.

. Drawing pain in the right tibia, near the heel, and afterwards in the whole foot, when sitting.

. Drawing pain, with pressure in the upper and inner side of the tibia below the patella, when extending the leg while sitting ; the pain goes off when bending the leg.

. Drawing, with pressure upon the tibia, in the evening, when sitting, disappearing when standing and walking.

785. Stitches in the tibiæ when walking, and going off when at rest (after 5 and more h.).

. Single, sharp, quickly recurring stitches in the upper part of the calf, when walking in the open air.

. Tearing in the calf.

. Hard, dark-red swelling on the calf, terminating in suppuration.

. Burning tension above the tendo Achillis.

790. Pain in the bones of the leg, when setting down the foot as if bruised by blows, and worse still when touching the parts ; when feeling them, the whole foot was seized with a shuddering and chilliness, as if she had plunged it into cold water.

. Sensation in the leg as if garters had been tied round it too fast, and as if it would go to sleep and become rigid.

. Cramp-pain in the left calf during the night, when extending and curbing the foot ; this pain hinders sleep.

. Pain in the lower half of both legs, as if the periosteum had been bruised and were swollen, only when standing ; erosive pain when feeling the parts, as is felt in a sore and bruised spot.

. Paralysis of the feet.

795. Violent, stinging burning of the dorsum of the foot, close to the tibia (when sitting).
. Stitching in the left foot.
. Swelling of the foot.
. Painful swelling of the foot.
. Weariness of the feet as if bruised.
800. Cold feet, in the evening.
. Boring stitches in the tips of the toes.
. Very soft swelling of the soles of the feet.
. Contractive, pinching pain in the outer side of the right foot, close to the sole of the foot (after 6 h.).
. Violent itching in the dorsum of the right foot, when walking or sitting, relieved for some time by scratching.
805. Stitching tingling, extending from the big toe to the dorsum of the foot, as if the part had been frozen, in the evening when sitting, disappearing when walking or standing. [Although the Cinchona-pains are, next to contact, most frequently increased by moving the part, yet there is an alternate effect of this symptom, which is not entirely rare, and which is its opposite ; here the Cinchona-pains are diminished or appeased ; sometimes the pains are mostly felt in a state of rest.]
. Stitching drawing in the heel (after 48 h.).
. Stitching tearing in the sole, in the region of the heel, when sitting or walking.
. Violently tearing stitching in the soles, when sitting or walking.
. Draing pain in in the metatarsal bones of the right foot.
810. Drawing, with sore pain, in the dorsum of the foot, when standing, going off when sitting.
. Cramp-like drawing in the internal surface of the left foot, when sitting.
. Jerking tearing in the tarsal and metatarsal bones.
. Jerking tearing in the metatarsal bones and toes.
. Jerking tearing, increased by contact, not by motion, in the metatarsal bones, and the phalanges of the toes, especially the joints (after 31 h.).
815. Jerking tearing, where the metatarsal and tarsal bones join one another (after 25 h.).

Sleep :-
. Inclination to lie down.
. Drowsiness, with palpitation of the heart.
. Drowsiness in day-time.
. Unceasing yawning ; without drowsiness.
820. The eyelids are about to close, from weakness and drowsiness.
. Continual drowsiness in day-time ; he falls asleep unawares.
. Invincible drowsiness when sitting.
. As soon as she sits down, in day-time, she falls into a doze ; but as soon as she lies down, she becomes wide awake from the

least noise.

. She is unable to sleep, the whole night; disagreeable thoughts crowd upon her one after the other.

825. He is prevented from going to sleep by a number of ideas and reflections occurring in rapid succession; in this way he wakes almost the whole night; this makes him to be quite warm in the morning; nevertheless he cannot bear being uncovered; no thirst.

. Sleeplessness after midnight: although he is very sleepy, nevertheless his thoughts remain wide awake; at the same time he closes his eyes and changes his position in the bed frequently.

. He fell asleep late; the thoughts which crowded upon his mind prevented him from sleeping; his sleep was not sound and in the morning, when rising, he felt quite worn out.

. Sleeplessness until midnight, with an aching pain over the whole head. [The aching pain in the head during the night appears to be characteristic of Cinchona. The pressure in the umbilical region, in the evening when in bed, is related to that aching.]

. Wide awake until two at night.

830. Drowsiness, followed soon after by wakefulness.

. Drowsy lassitude.

. Drowsiness the whole day, with yawning and stretching of the limbs.

. He wakes two hours before his usual hour.

. Sleeps only from 3 till 5 in the morning.

835. Deep sleep, like that of a drunkard; in the morning his head feels dreary, as if he had not slept enough, and, when shaking the head, he feels a pressure in the temples.

. Restlessness, sleeplessness.

. Restless sleep, with tossing about, without waking.

. Restless sleep; he was unable to sleep; asleep, he soon woke again, with sweat in the hair of the head and on the forehead with chilliness over the back.

. Restless sleep, and after waking, a slight sweat all over the body.

840. In the evening, when in bed, a pressure in the umbilical region with sensation as of pinching the parts together.

. In the night, headache and dreams, causing him to start, in alternation.

. Restless sleep, in the night, from which he started up from time to time, and afterwards remained unconscious of himself for a few moments.

. Confused visions in his dreams, in the evening; when dropping to sleep, they wake him again (after 16 h.).

. Fearfulness, at night, when waking from terrible dreams.

845. Frightful dreams about falling from a height; when waking he is full of uneasiness, and is unable to collect his senses for a few moments.

. Frightful dreams about misfortunes, they rouse him up; still he is unable to collect his senses.

. Anxious dreams in the night; roused from his sleep, he was in a state of half-consciousness, and remained yet for some minutes in a state of fear.

. Sleep disturbed by confused and interrupted dreams, waking several times; he woke, but remained unconscious.

. Confused, unmeaning dreams after midnight, mixed with wakings in a state of half consciousness.

850. Confused, absurd dreams, which frequently rouse him from sleep.

. Lascivious dreams, with pollutions.

. Restless night-sleep, with vexatious dreams and tossing about waking every time he dreams.

. In his sleep he throws himself from side to side, uncovers himself, and is tormented by all sorts of vexatious dreams about past things; in the morning he is unable to become wide awake, owing to the dreary condition of his head; he feels broken down in the morning, unrefreshed by sleep.

. When on the point of going to sleep, he is roused from sleep by frightful fancies. [Cinchona is characterized by restless night-sleep with dreams causing anxiety and starting; when waking from those dreams one finds it difficult to come to one's senses, or the anxiety continues.]

855. Terrifying dream in the night.

. Heavy dreams in the night, the anxiety continuing even after waking.

. Dream causing anxiety; he imagines he is to descend a steep precipice; this rouses him from sleep; but the dangerous spot remain so vividly before his fancy (especially when closing the eyes) that the fear which he felt continues yet a long while.

. In the morning, when waking, he is tormented by anxious ideas and thoughts.

. She has ugly dreams as soon as she closes her eyes.

860. He starts when about to fall asleep.

. Restless sleep full of dreams and shrieks.

. He is unable to collect his senses when waking in the night.

. When waking in the night, he felt a giddiness, so that he dared not raise himself.

. He starts in the night, when asleep.

865. Snoring and moaning, when asleep, in children.

. Snoring inspirations and expirations when asleep.

. Snoring inspiration (through the nose) when asleep.

. When asleep, the inspirations are somewhat snoring, the expirations *puffing*.

. When asleep, one eye is open, the other half closed, the eyeballs being turned backwards, as in dying persons.

870. When sleeping, he lies on his back, the head bent backwards, the arms extended above the head, with slow expirations and

strong and quick pulse.

. Heat in the head towards morning, and oppression of the chest.

. He sweats in the night unceasingly, even when but lightly covered.

. When covering himself he gets into a profuse perspiration all over the body; this is very disagreeable to him: nevertheless he feels so drowsy that he is unable to collect his senses and to rise.

. Sweats when sleeping.

875. Sweats, early in the morning, while sleeping.

. Greasy morning sweat.

. The face became sweaty, in the morning shortly after rising.

Fever :—

. Dread of the open air.

. Feeling of icy coldness in the left hand; externally it feels as warm as the right.

880. Cold hands, feet and nose.

. He is cold all over.

. Yawning.

. Stretching.

. Yawning, with chilliness.

885. Feverish attack, commencing with sneezing.

. Inclination to yawn.

. Yawning and stretching of the limbs (after ¼ h.).

. In the open air he is attacked with more violent shudderings, accompanied with shaking chills and goose-flesh.

. He is attacked with shuddering and thrills of chilliness in the open air, which is not cold; they cease at once in the room.

890. In the open air, which is not very cold, he is attacked with trembling of the limbs from chilliness, and with thrills of shuddering over the thighs.

. He does not feel cold, although the room is cold (after 9 h.).

. Cold hands, and chilliness over the whole body, externally, as if he had cold water poured over him, in the open air, where the chilliness finally increased to chattering of teeth; the chilliness passed off in the room, but the cold hands remained.

. Cold hands and feet, even in the warm room.

. Cold hands.

895. Cold feet in the evening.

. Cold sensation of the left leg, from the knee to the foot.

. Shuddering, immediately above both elbows and above the knees.

. Icy-cold feet, the other parts of the body being warm (after 1 h.).

. Sensation of coldness of the lower limbs, whilst face and chest are yet warm (after 1 h.).

900. The right hand is warm (when writing,) the left cold.

. The right hand is considerably colder than the left.

. Cold hands and feet, early in the morning, and thrills of chilliness over the thighs, increasing when walking (after 28 h.).

. Slight chills (after ¼ h.).

. Slight chills over the whole body.

905. Thrills of chilliness, over the back (immediately).

. Slight chilliness in the back (after 3 h.).

. Chilliness of the whole body, with very cold feet (after 2 h.).

. Chills over the whole body, without thirst.

. Chilliness over the whole body, with cold hands (after ½ h.).

910. Slight chills through the whole body, without external coldness.

. Chilliness through the whole body, rather internally (after 3½ h.).

. Chills over the body, as if a cool wind were blowing upon him, especially when walking, rarely accompanied with shuddering, this only comes on when sitting down and extends over arms, loins, and thighs (after 8 h.).

. Shuddering over the whole body, with goose-flesh (after 1 h.).

. Shuddering, and chills with shakes, over the whole body.

915. Chills, internal and external, through the whole body, sometimes more in the marrow of the bones of the feet; these are colder than the hands (after ½ h.).

. Internal coldness, periodically accompanied with shuddering and chills over the whole body (immediately).

. Internal chilliness, without any coldness being perceptible when touching the body (after 4 h.).

. Internal feeling of coldness, mostly in the arms and hands.

. Chilliness, without the body being cold, without thirst, the interval between the hot and cold stage being 1½ h., and these intervals increasing more and more on the second and third day after taking the medicine.

920. Internal chilliness, with external chills and shuddering, the left hand and foot being colder in the commencement, afterwards both hands and feet becoming equally cold, without thirst (after ½ to 1 h.).

. Shuddering over the whole body, less violent on the limbs; no thirst; the body is not cold; only the hands are (after ½ h.).

. Shuddering over the whole body, without thirst (after 2½ h.).

. Chills over the whole body, with icy-cold hands, without thirst (after 1-3 h.).

. Chills and internal coldness, for several hours, without thirst (after ½, 1 h.).

925. Thirst after the cold stage, without any subsequent heat.

. Feverish chilliness over the whole body, from time to time, during the whole day, especially on the forehead, which was covered with cold sweat; violent thirst a quarter of an hour after the first chills (after 1 h.).

. Feverish chilliness (after ¾ h.), going and coming, accompanied with weakness of the knees and tibiæ when walking or standing, less when sitting.

. Early in the morning, violent, feverish chills, with weakness of the feet (after 12 h.).

. Aching pain in the abdomen, during the chills (after ¼ h.).

930. Slight chills through the whole body, without any internal coldness, afterwards dull, cutting headache extending into the orbit.

. Shuddering, and chills with shakes through the whole body, with cold hands and mental oppression (after 1 h.).

. Shuddering, in the morning and forenoon, with cold hands, feeling of nausea and quick pulse.

. At five o'clock in the evening, coldness and shuddering when walking in the open air, going off in the room (after 10 h.); an hour after, great heat, especially in the face, increasing during motion and when walking; thirst sets in one hour after the heat had ceased.

. Two chills at different periods before the heat sets in.

935. Heat alternating with chilliness; the heat sets in about an hour or half an hour after the chilliness; during the hot stage he feels a little thirst for cold water.

. Chilliness on the back when walking in the open air, afterwards heat in the back, with subsequent sweat, which is again followed by a sensation of coldness and chilliness.

. Quick and hard pulse, with flushes of heat and alternate chilliness in the back, which became covered with cold sweat, the same as the forehead (in a few minutes); no thirst either in the hot or cold stage, for five hours.

. Alternate chilliness and heat the whole afternoon, accompanied by weakness of the lower limbs; all these symptoms are much worse when walking in the open air.

. The whole day, feeling of heat and redness of the face, mingled occasionally with attacks of feverish chilliness and sweat, with little thirst.

940· Alternate warmth and coldness over the whole body (after ½ to 1 h.), the whole forenoon.

. In the evening cold hands and hot cheeks.

. Warmth and redness in the face, whilst the remaining parts of the body were cold; sometimes accompanied with a disagreeable feeling of coldness (chilliness) on the warm forehead.

. Great internal heat in the whole face, trunk, thighs, with cold sweat on the forehead, cold cheeks and cold feet (after 10½ h.).

. Warmth in the face, and chilliness of the rest of the body; shortly after, the forehead feels cold and the rest of the body warm.

945. Great feeling of heat over the whole body, with red cheeks, heat of the trunk and arms, moderately warm thighs, legs and feet, the forehead being moist, and no thirst.

. Feeling of heat and redness of the cheeks, without any warmth being perceptible to the touch, no thirst, cold feet (after 9 h.)

. When going in the open air out of a room which was not warm, but the temperature of which had been increased a little, he feels a coldness around the tarsal joints, and the rest of the body is cold (before dinner).

. He eats his dinner with a good appetite; an hour after he feels cold, no thirst, afterwards heat.

. Heat and feeling of heat over the body; in the commencement of the attack the limbs are cold, they feel cold to him (after ½ h.), with but little thirst for cold water.

950. Dry heat, the whole day.

. Unquenchable thirst during the hot and cold stages of a fever and ague.

. Thirst during the chills. [This symptom does not seem to have been observed correctly; for in all my other observations I have found that the Cinchona-fever is characterized by the thirst not appearing during the cold stage, either shuddering or chilliness; that, on the contrary, thirst came after the cold stage, or, which is the same thing, that thirst came shortly before the hot stage set in. There is likewise no thirst in the Cinchona-fever during the hot stage, except some burning of the lips or some dryness of that part which dryness accounts for the symptom: sensation of slight thirst during the hot stage; the "thirst accompanying flushes of heat," is not to be considered as characteristic of the perfect fever-heat. In the Cinchona-fever thirst sets in after the hot, or, which is the same thing, during the sweaty stage. The fever-heat accompanied with stinging over the whole body, seems to form an exception.]

. Thirst after the thrills of shuddering through the skin.

. Chills with shaking of half an hour's duration early in the morning, without thirst, and without any subsequent heat.

955. Shuddering and chilliness, when entering a warm room from the open air.

. Chills on chest and arms, when walking in the open air.

. Chilliness over the arms, with inclination to vomit about the stomach, afterwards cold limbs, with shuddering and returning nausea.

. Palpitation of the heart, and shortly after chilliness. [The Cinchona-fever frequently commences with an accessory symptom, palpitation of the heart or sneezing, or great anxiety, or nausea, or great thirst, or canine hunger, or aching pain in the hypogastrium, or headache.]

. Violent chills with shaking, in the evening when lying down.

960. Redness and heat of the cheek and lobule, with chilliness over arms and abdomen.

. Redness and heat of the cheek and lobule of one or the other side; before this has passed, a chilliness is felt over the whole body, and lastly over the lower limbs.

. Heat in the face, and, in a few hours, shuddering and chilliness, with coldness over the whole body.

. Heat in the head, with distension of the veins of the hands. [In the Cinchona-fever the veins are generally distended, even when the head is merely hot, as in this instance, or, when there is a general increase of temperature of the body, or when the patient feels a heat, without any heat being felt when touching him, and also when there is a real external heat.]

. The blood rises to the head, the forehead is hot and the limbs are cold. [One of the most frequent symptoms of Cinchona-fever is the rush of blood to the head, generally accompanied with redness and heat of the face, frequently with chilliness of the other parts of the body, also when there is external coldness, or when there is merely coldness of the face preceptible internally, the cheeks feeling cold when touched, and there being a cold sweat on the forehead.]

965. Sensation of heat through the whole body, with distended veins, cold feet, the general external warmth of the body not being perceptibly increased.

. The warmth of the body is somewhat increased, with distended veins, but no thirst, and easily dilated pupils.

. Heat over the whole body, without thirst.

. During the hot stage, shortly after midnight, no thirst, only dry lips.

. In the hot stage he can scarcely uncover his hand without feeling a pain.

970. Feeling of flushes of heat, with thirst for cold drinks.

. Great thirst, one hour (after 9½ h.), followed by a burning heat over the whole body, with throbbing in all the arteries, without sweat or thirst, the ears being burning hot, with burning of the forehead; cheeks, hands and feet are moderately warm; nevertheless, these parts feel to him too hot (after 10 ½ h.).

. Dry palate, and thirst, in the evening, one hour after the heat.

. Thirst after the hot stage, while sweat had broken out on the back and forehead.

. Fever, with want of appetite.

975. In the evening, one hour after the hot stage, thirst and hunger; afterwards, after having eaten, coldness and grunting in the abdomen.

. Heat of the body, and redness and heat of the face, for three hours, with violent hunger; the lips feel burning when bringing them in contact with one another; the skin around the lips is likewise affected with a stinging burning pain (afternoon).

. Heat of the whole body (from 5 to 7 o'clock in the afternoon), increasing by a walk in the open air and producing sweat on the forehead, preceded by violent hunger, which continues even yet in the commencement of the heat and returns after the fever; while walking, the abdomen feels as if hot water were running over it, (a flush of heat over the whole of the abdomen and thighs,) with red cheeks, no thirst (after 12 h.).

. Warmth in the face and redness of the cheeks, with dry, viscid lips, without thirst, at 3 o'clock in the afternoon.

. Heat of the whole body, with distended veins of the arms and hands, without sweat or thirst (after 4½ h.).

980. Irregular, acute fevers, with excessive sweat.

. Profuse sweat.

. Exhausting sweat at the termination of the heat.

. General, profuse sweat.

. In the morning, after the nightly sweat, the skin is not sensitive to the air, nor liable to catch cold; he may uncover himself without any injury.

985. After walking (at three o'clock in the night) sweat of the body, with thirst, but no sweat on the feet; there is no sweat about the head, except on that cheek upon which he rests.

. Violent sweat over the whole body, when walking in the open air.

. Cold sweat in the face, with thirst.

. Cold sweat over the whole body.

. The whole body is very warm, especially the face and chest (after ½ h.).

990. Heat through the whole body, internally and externally, as if from drinking wine, with redness of countenance.

. Heat all over, and fine prickings in the skin of the whole body, especially that of the neck, with violent thirst for cold water (after 22 h.).

. Transitory sensation of heat, and heat over the whole body, and in some parts of the skin fine, slight prickings, with thirst for cold water (after 1 h.).

. Violent desire for cold water, with chilliness and heat, especially early in the morning, immediately after waking.

. In the morning the thirst is greater than in the afternoon.

995. Some heat towards evening, no chilliness, pulse quicker (after 12 h.).

. Quick, irregular pulsations (after 6 h.).

. The pulse is much slower and weaker (the first hour) (from taking half an ounce).

. Slow, faint pulse (after 1½ h.).

. Slow, weak pulse becoming gradually quicker and stronger (after ¾ h.).

1000. The fever anticipates, when employing the Cinchona in the treatment of intermittent fevers.

. Diminution of the chilliness, and increase of the heat.

. Increased feverish heat, when employing Cinchona in the treatment of intermittent fevers.

. Delirium during the hot stage.

. Delirium from the same cause as last mentioned.

Skin :—

1005. Excessive, almost painful sensitiveness of the skin of the whole body, even of the palms of the hands.

. Digging-up pain in the wound.

. Boring pain in the ulcer.

. Stinging, itching pain in the wound (ulcer) for two hours (in a few hours).

. Stinging, throbbing pain in the ulcer, even when at rest.

1010. The ulcer becomes painfully sensitive, a boring pain is felt in it.

. Throbbing pain in the ulcer, when moving the part, not during rest.

. An ichor having a putrid smell forms in the ulcer; a burning and a pressure are felt in it; he cannot let his foot hang down; the foot is painful when standing.

. Itching of the arms, loins and chest, especially in the evening; scratching brings on pimples.

. Smarting itching, almost only of those parts upon which he lies when in bed; scratching relieves it momentarily; when lying upon the unaffected sides so that the itching parts are uppermost, the itching soon disappears.

1015. Smarting itching, almost only of those parts, upon which he does not rest (during the siesta) and which are turned uppermost.

. Itching of the skin; scratching brings on blisters the same as nettles.

. Itching of the skin; when scratching it, blood exudes from the pores.

. Stinging in different parts of the skin.

. Stitching in a cicatrix of the left foot.

1020. Pulling in the skin, on some parts of the abdomen, as if a hair were pulled at.

. Burning itching in the bend of the knee and on the inner surface of the arms, in a warm room, and at night, when in bed, with an eruption of small vesicles containing water and disappearing in the cold air.

. Burning in different parts of the body, mingled with a creeping and itching in day time.

. Dropsy.

. Anasarca.

1025. Swelling of the limbs.

. Erysipelatous swelling of the whole body.

. Yellowish color of the skin.

. Jaundice.

General Symptoms, Weakness-Fits:—

. Stitching, now in the tibiæ, now in the back, now in the chest, when sitting (after 14 h.).

1030. Spasmodic twitching of certain parts of muscles.

. Jerking tearing* in different parts of the limbs, especially of the hands and feet, aggravated by contact.

. Drawing sensation in the outer parts of the bones.

. Stretching, drawing pain in almost all the bones, now in one, now in the other, causing an intense sensitiveness to pain; when lying down, it abated for a few moments, but returned afterwards with so much more violence (after 14 h.).

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* Jerking tearing appears to be characteristic of the pain excited by *Cinch.*

. Bone-pain in the articulation of the ribs, limbs, shoulders, scapulæ, as if bruised, when he stirs or moves ever so little.

1035. Pain of the joints, when sitting or lying down; the limbs cannot be left quiet in one position, as occurs when they have been excessively fatigued by a long journey, or when exhausted by blood-letting or excessive loss of semen; the limbs require to have their position changed all the time, extending or bending them, etc. [The weakness, alluded to in this paragraph, as if it had been caused by a great loss of humors, and still more especially indicated in 1063, 1065, 1066, 1068, 1082, 1087, together with the moral symptoms 9, 15, 16, 22, 24, 30, the symptoms indicating a disturbance in the digestive organs, the ailments after a meal, the easily excited sweat, especially in the back, during motion and sleep, and the affections of the head, is precisely that kind of weakness, for which Cinchona is a specific, and which affects, almost without an exception, persons who have lost a portion of their strength by hæmorrhages and frequent venesection, galactirrhœa, excessive lactation, coition, onanism, involuntary emission of semen, profuse natural or artificial sweats in disease, natural or artificial diarrhœa. When Cinchona is given for any other kind of weakness, which is not the disease itself, its exhibition may be followed by the most pernicious consequences, and may even endanger life. Indeed, even in these cases, it produces an excitement, but it is not a natural excitement, it is an over-straining of the vital powers of the patient, which may be followed by a perfect collapse, or may entail upon the patient a cachectic condition of the system which it is either difficult or frequently impossible to cure.]

. All the joints feel bruised during the morning-sleep; the pain increases in proportion to their being left quiet; the limbs therefore require to be moved frequently, because the pains diminish by motion; they go off when wide awake.

. Pain in all the joints, as if they were being pressed upon by a heavy weight, in the morning when in bed; the pain goes off when rising.

. Pain in the joints when sitting, as if pressed upon by a heavy weight; the longer he sits the greater his weariness.

. All the joints feel stiff when rising from his siesta.

1040. When rising from bed, in the morning or after the siesta, he feels a paralytic stiffness in all the limbs, oppressing the mind.

. Cracking in the joints.

. He feels a pain all over, in the joints, bones and periosteum, as if he had strained the parts, or like a drawing and tearing, especially in the dorsal spine, small of the back, knee and thighs.

. Gout.

. Rheumatic pains.

1045. Pain in the limbs, especially the joints.
. Tensive pains.
. Erratic rheumatism, now in one, now in another part, without swelling or fever, alternating with pains in the internal body (after using the drug for a long time).
. Consumption.
. Cachexia.
1050. Hectic Fevers.
. Weakness.
. Weakness in the limbs.
. Chronic weakness.
. Failing of strength.
1055. Feeling of weakness, especially when rising from the seat; he prefers sitting down again; he sometimes falls back upon his chair, unless he stretches the muscles. This sitting down again is followed by an agreeable feeling of rest (after 3, 4 h.).
. When walking he soon felt exhausted, as if his legs felt heavy and paralytic.
. Heaviness in the body.
. Heaviness in all the limbs, especially the thighs, as if lead were hanging on them.
. Oppression of all parts of the body, as if the clothes were too tight (after a walk in the open air).
1060. The limbs, upon which he lies, go to sleep.
. The limbs feel numb and pithy.
. He feels ill all over.
. The whole nervous system is so to say morbidly excited, strained.
. Excessive sensitiveness of all the nerves, with a morbid sensation of general weakness.
1065. Internal feeling as if a disease were approaching.
. Excessive irritability, with discouragement and intolerance of noise.
. Languid condition of the mind and body, with excessive sensitiveness.
. Ailments from a little draft of air.
. Excessive sensitiveness of the nervous system; sight, smell, hearing and taste are too strongly affected by every thing, it offends his internal sensations and affects his mind unpleasantly.
1070. The previous pains feel as if checked and suppressed violently, leaving a great heaviness in the whole body.
. Lassitude.
. Tremulous weakness of the limbs, with dilatation of the pupils.
. Laziness.
. When he attempted to keep himself erect for a few moments, he felt stiff, turned pale and lost his senses.
1075. Loss of senses and exhaustion, at the same time.
. Slight attacks of apoplexy and loss of consciousness.
. Weakness and prostration of the whole body.

. Violent swoon (in the case of a robust man who had taken 16 grains of Cinchona at a dose; the fainting fit was so violent that he did not recover from it till he had taken an emetic).

. Fainting fits.

1080. Fainting fit, death.

. Asphyxia, apparent death.

. Faintness and prostration of both body and mind (after 1 h.).

. Faintness; he is scarcely able to keep his head erect, and goes to sleep.

. Exhausted condition of all the limbs, and tremor of the hands.

1085. The whole body feels weak, even when sitting, but much more when walking.

. Now weakness, now feeling of great strength in the joints. (Alternate effects in a healthy person.)

. In the open air he feels quite faint about the stomach and chest, and he is weak, although he is abundantly strong enough to walk.

. Extreme lightness of motion, as if he were a spirit (after 2 to 3 h.). (Alternate effect succeeding a feeling of weakness which had been previously excited by Cinchona.)

. Cheerfulness, but with staring eyes, the whole evening. (A sort of unnatural excitement, similar to the artificial strength which physicians excite in a patient when they fail in curing the disease.)

1090. Feeling of ease, in the evening.

. Tremor in all the limbs, invisible, but perceptible and accompanied with a sensation of coolness.

. Convulsions.

[Peculiarities:—

Complaints predominant in *internal* parts.
Complaints (cold, heat, heat, &c.) predominant in *left* side.
Itching in external parts.
Itching, lessened by scratching.
Pulse unequal, intermitting, frequent, small, but hard.
Ulcers with copious ichorous discharge.
Hæmorrhages, blood dark, coagulates neither easily nor entirely.
Nocturnal blindness.
Impotence.
Toothache during sweating stage of fever.
Diarrhœa generally painless.
Thirst most prominent in the transition from chill to heat, and from heat to sweat, also *after* the sweating stage and *before* chills.
Remission afternoon and evening.
Aggravation in the Fall.
Vertigo, inclining to fall backwards.
Predom. worse out doors.
" " by cold.
" " when lying on painful side.
" " from tying the clothes tight.

Predom. worse when bending the head sideways.
,, ,, from exertion (bodily).
,, ,, from partaking of sour things.
,, ,, from exercise
,, ,, from lying on right side
,, ,, when stretching out diseased limb.
,, ,, from moistening and washing suffering parts.
,, ,, in wet weather.
,, ,, from wrapping up head.
,, ,, when ascending.
Predom. better in warm room.
,, ,, from warmth in general.
,, ,, when lying on unpainful side, or on a cold pillow.
,, ,, when drawing up diseased limb.
,, ,, when eating.
,, ,, during rest.
,, ,, lying on left side.
,, ,, from loosening the clothes.
,, ,, from rubbing and scratching.
,, ,, in dry weather.
,, ,, when descending.
,, ,, from uncovering the head.
,, ,, after sleep (if sufficient).—Gross's *Comp. Mat. Med.* by Hering.]

EDITOR'S NOTES.

Amputation of the Penis by the Galvano Caustic Method.

The *Practitioner* for August quoting from an interesting account of the facility of the amputations of the penis by the galvano-caustic method contributed by Dr. Pisa to the *L'Imparziale* (June) gives the following case as reported by the worthy Doctor :—"The patient was admitted into the Royal Hospital of S. M. Nuova Gætano Nesi di Greve, under the care of Dr. Franscain. He had enjoyed good health up to about a year previously, when a swelling appeared in the corona glandis, which gradually advanced, invading the glans and the prepuce on the other. In the early stages of the affection no pain had been experienced, but latterly he had some lancinating pains and the tumor had assumed a fungous aspect, and discharged pus. At a consultation held between Professors Corradi, Nuici, and Gozzini, it was decided that the tumor with the extremety of the penis should be removed by the galvano-caustic method. Accordingly a platinum thread was passed round the organ below the tumor and heated to whiteness by the electric current. The glans and part of the prepuce were removed in the short space of thirty seconds the patient scarcely suffering any pain, and a healthy surface being left. Scarcely any hæmorrhage occurred, A gum elastic syringe was introduced into the urethra. Everything went on well for nine days, when, unfortunately for the patient, two cases of hospital gangrene occurred in the same ward. He was attacked with febrile symptoms, became jaundiced, and died on the twentieth day after the operation."

Female Doctors in Egypt.

Mr. W. Gilbert, a writer in *Cassell's Magazine* (August) gives an account of female medical education in Egypt, which is highly interesting, and which shews that in this respect Egypt is superior to Europe. During the Viceroyalty of Mahomed Ali, when Clot Bey was employed to organize a medical staff for that country, and a medical school was established after the European fashion, the jealous Mussulmans opposed all obstacles in the way of admitting male medical practitioners into their families. About this time, the small-pox broke out in Cairo with great violence. An order was passed on the Government medical staff to visit every house, but it was by the most despotic measures only that that order could be enforced. This state of things being any thing but satisfactory, Burguières Bey, the present head of the medical staff, laid before the present Khedive, soon after his assumption of the Viceroyalty, a scheme for establishing a school for midwives, and obtained his approval. The school is now in existence for some years, and the curriculum of professional education is said to include chemistry, botany, physiology and female anatomy, and the degree of proficiency aimed at in the institution is fully equal to the pass examination standard in the London Apothecaries' Hall. The female students are chiefly Nubians and Copts. They receive their instructions in the European system of medicine through the medium of the Arabic, and the majority of them learn besides one of the European languages, chiefly French or Italian. They wear their habitual costume, and cover their persons with long, loose black silk dresses, leaving their eyes only visible. When called out to attend any case, they invariably ride on donkeys with red saddle-cloths, that the mission they are bound on, may be known, "and all persons make way for them, a practice which, though adopted voluntarily, is as faithfully respected as if it had been an order from the police."

DR. MARY J. SAFFORD ON PRURITUS.

It may not be unknown to our readers that there are female Homœopathic physicians in America. One of these physicians, Dr. Mary J. Safford, lately contributed a very interesting paper on *Pruritus* prevailing among her own sex. As such patients are very apt to keep this disease to themselves, from a notion, not always correct, that it would reflect discredit on their character, it is a fortunate thing that Dr. Mary Safford has made it her special study. She differs from Hebra in the opinion that the disease occurs almost exclusively in poor subjects and those ill-nourished in childhood. According to her it may appear at any age and in all conditions of life ; she has seen it as frequently among the well-to-do as among the poorer classes ; and she has known several cases in which young girls have become onanists from the intense desire they had to produce friction upon the parts affected. There is usually present a vaginal, utero-cervical, and it may be uterine catarrh, accompanied by a restless nervous state and a despondent mental condition. The itching becomes more intense when the patient is warm in bed, or when chilly, and while walking and driving. The covering or cuticle of the mons veneris and of the labia, is sometimes abraded and even quite removed. There may also be excoriation, a papular eruption and pustules, and these, from scratching, become converted into dark heavy-scabbed sores. Dr. Safford is further of opinion that Pruritus is often an accompaniment to the first stages of cancer of the uterus, and she cites a case of a young woman, who died of phthisis, but who had suffered continually from this disease, in which the ureters were found, on post-mortem examination, to be fairly clogged with bacteria. "These insinuating life atoms," she continues, "are not unfrequently found in the secretions from normal vaginæ, and are never wanting in the secretions of patients suffering from pruritus." She next cites three cases treated by her, the first of that "of a young girl who had suffered intensely at her menstrual periods. On examination, the hymen was found to almost completely close the vulvular orifice; a slight crescent shaped incision made in it was followed by a profuse flow of dark, offensive smelling blood. Her menses flowed normally, and there was a cessation of the pruritus." The second and third cases are given below:—

A woman aged 40, married for twenty years, sterile, active, and with former robust health, consulted me. She had always menstruated regularly, but for two years had suffered from an increasing dysmenorrhœa. For a week after the flow ceased there was a watery discharge, sometimes slightly tinged with blood, and this was followed, during the menstrual interval, by a glairy, yellowish-tinged, excoriating discharge and an almost continuous pruritus. I found the vulva and vagina unusually narrowed; the uterus slightly retroverted and enlarged; the cervix with a normal appearance, save that neither sight nor touch at first revealed any os uteri. Under a slight fold of membrane was finally discovered an opening so minute that only the finest silver-wire probe would enter it; and this met with obstruction, so that it was impossible to pass it through the internal os. There was no cicatrized tissue about the neck. She had never been examined before, and did not remember to have had any inflammation or suffering in this region. So one could but infer that the condition of the os was congenital. Why her menstrual periods formerly had not been attended with suffering, seemed inexplicable.

I gave the remedies most relied upon in such cases, in potencies from the 30th to the 200th, without marked relief, and believing the mechanical hinderance too great to be overcome by remedies administered internally, I performed hysterotomy, by Dr. Sims' method—two lateral incisions extending through the internal os. For three days sea-tangle tents were kept in the cervix, and a pledget of cotton was applied to it saturated with a weak solution of carbolic acid and glycerine.

There was no hæmorrhage of any consequence attending the operation. The woman was more quiet for a few days than usual, but kept up and about the house. The wounds healed readily, and the cervical canal remained open sufficiently to introduce a medium-sized sound. The dysmenorrhœa was completely cured as well as the pruritus, and she now enjoys her former robust health.

Still another case, is that of a plethoric unmarried woman aged 38, who had suffered for some years from pruritus, during menstrual period. For a year it had not been limited to this time, and was now almost continuous. And so intense became the suffering at night, that she was often forced to leave her bed and walk the floor. From an unconscious friction, which she thought must have occurred while asleep, the external organs were covered by a fine vesicular eruption. For this I prescribed *Rhus tox*, 200, with cool sitz-baths, and at night an application of cold to the parts affected. The eruption disappeared and the itching, but for a time only.

There was a milky leucorrhœa which *Calc. carb.*, 200, removed; the irritation, though somewhat ameliorated, still remained. Warm baths were tried with only temporary relief.

Finally a solution of *Carbolic acid* and water, five drops to the ounce, was used as a wash, and applied upon a compress at night; as there was considerable burning and redness of the parts, *Carbolic acid*, 30, was at the same time given internally. Unbroken rest was enjoyed in a short time, and there has been a perfect cessation of the trouble since that time.

THE CALCUTTA MEDICAL COLLEGE.

VI.

In our last we brought our narrative of the College down to the commencement of 1837, when the Institution suffered a heavy loss in the death of its first Principal, to whose fostering care and indefatigable exertions it owed its remarkable success even at that infant stage of its existence. In Principal Bramley not only did the College lose its best and most energetic promoter, but the country lost a true friend. Mr. Bramley was not long in the service of the Hon'ble Company when he became Principal of the College, and this was probably the reason why he was looked upon at the time with an eye of jealousy by his conferes of that service. He had entered that service in August 1829. His first appointment was that of one of the assistants to the Garrison Surgeon, Fort William. Subsequently he was made surgeon to the Residency of Nepal, whence after a short residence he was summoned to the Presidency to fill the situation of assistant to the Marine Surgeon; after which, as we have already seen, he was appointed by Lord W. Bentinck to take charge of the New Medical College, under the title of Superintendent, which was subsequently changed to the more appropriate and dignified title of Principal by the Government of Sir Charles Metcalfe. The *India Journal of Medical Science*, no warm advocate of Mr. Bramley, paid him the following tribute after his death :—" As a lecturer Mr. Bramley was admirably adapted. To a simple he added a nervous style of delivery. There was an easy condescension in his manner, which no doubt gained the esteem and respect of his pupils. By judicious pauses he rivetted the attention of his hearers, and displayed, without being too energetic, an animation which discovered the deep interest he took in his subject and the anxiety he felt to secure success."—" His figure was commanding, his manners fascinating. Possessing many elegant accomplishments, he was sought for, and mixed, in extensive circles of the aristocracy in the metropolis of India." Mr. Bramley was no more than 34 years when he died. Who does not mourn over the untimely death of such a man, so soon lost to the country unfortunate in so many respects, and to the Institution destined to raise that country from its depths of degradation, and who will not sigh with the poet—

Oh ! why has worth so short a date,
While villains ripen grey with time !

Out of evil good may be educed, and Government acted most wisely in abolishing, on the death of Mr. Bramley, the office of principal, and devoting the amount thus saved to the creation of some separate chairs, whereby, although no new subject was introduced into the curriculum, more efficient teaching of the subjects already in the course was secured. These subjects were anatomy and physiology, chemistry including natural philosophy, materia medica including pharmacy, medicine including clinical medicine, surgery including clinical surgery. The important subjects of medical jurisprudence and midwifery were thus not thought of, nor were they added to the course till sometime after.

The following prizes, awarded in 1837, show the progress of the students in anatomy and chemistry. We may remark in passing that it was in this year that prizes were for the first time awarded for proficiency in anatomy, and this for the obvious reason that dissections did not commence till near the end of 1836, and no prize could be merited before that.

LIST OF ANATOMICAL PRIZES, DELIVERED ON THE 29TH JUNE, 1837.

Government Prizes.

Isserchunder Dutt	Gold Medal.
Mr. R. G. Heming	Silver Ditto.

Dwarkanath Prizes.

Rajkistno Day	270	Rs.
Isserchunder Gongoley	270	„
Shamchurn Dutt	120	„
Ramnarain Doss	120	„
Umachurn Set	120	„
Punchnun Sreemany	120	„
Jaudobchunder Dhurrah	50	„
Nobinchunder Mitter	50	„
Dwarknauth Goopta	50	„
Ramcomar Dutt	50	„
Kaledoss Mo[illegible]erjee	50	„
Parmanund Set	50	„

LIST OF CHEMICAL PRIZES, DELIVERED ON THE 9TH DEC., 1837.

Government Prizes.

R. G. Heming	Gold Medal.
G. R. Naylor	Silver Ditto.

Dwarkanath Prizes.

Issurchunder Gangoley	150	Rs.
Nobinchunder Mitter	150	
Ramnarain Doss	100	
Ramcomar Dutt	100	
Umachurn Set	100	
Gobinchunder Paul, 1 Chemical Chest, value	100	
Harrauchunder Doss	50	
Satcoore Dutt	50	

It does not appear that up to this time Government had any definite idea of the requirements or the productive powers of the institution they had called into existence. The college was established, on the ruins, so to say, of the Native Medical Institution and the Medical classes of Sanskrit and Madrissa Colleges, at the recommendation of the Committee appointed for the purpose. But the recommendation of that Committee in all its details was not followed. Otherwise the College would not have been opened with only two professors (one of whom was also to act as the general head) to teach the whole circle of the medical sciences on the model of Europe. Again, when on the death of the principal the professorial staff was reorganized as afore-mentioned, two most important subjects in a medical curriculum, midwifery and medical jorisprudence, were altogether lost sight of. But that which strikingly demonstrates the want of a definite plan in the creation of the College is the fact of Government addressing a letter in March 1838, "through the General Committee of Public Instruction, to the College Council, calling upon them to report the names of such students as they considered fit to undertake the office of Surgeon to the Provincial Dispensaries about to be established in various parts of Bengal." Now at this time the College was in existence only two years and ten months, and Government had so far forgotten the report of the Committee, or were so ignorant of the system of Medical Education in Europe, that they thought this period was enough to have made pupils acquainted with the medical sciences in all their details and thus rendered fit to take independent charge of public dispensaries. The College Council, in their reply, stated that they could not "as yet consider their Pupils sufficiently advanced in the knowledge of the *Practice of Surgery and Medicine* to permit their employment in general practice with advantage to the public or credit to the institution, in which they have been brought up." The chief reason for this was that *clinical* instruction had only then just commenced, and the Council said that six months at least must elapse before the pupils "will have learned to apply to the treatment of disease the elementary and theoretical knowledge of medicine which they already so fully possess." The Council reminded Government that the minimum term of instruction in any school of medicine could not possibly be less than four years, "but anxious to facilitate in every degree the wishes of the Government and hailing the creation of their Dispensaries with the most grateful feelings as the means of providing for their pupils, they will, with pleasure, redouble all their exertions to qualify the senior classes by the end of October to fill these important situations."

On the 17th October Government appointed, for the examination of candidates, a Committee, consisting of Surgeon Samuel Nicolson, Surgeon to the General Hospital, Surgeon John Grant, Apothecary to the Hon'ble East India Company, Surgeon Ranald Martin, Presidency Surgeon and Surgeon to the Native Hospital, and Assistant Surgeon Duncan Stewart, Superintendent General of Vaccination. The College itself was deemed the most suitable place for the examination, which commenced on Tuesday, the 30th October. The senior pupils, who presented themselves as candidates for letters testimonial, were the following:—

	Names.	*Caste*	*Nativity.*
1.	Uma Churn Set	Kaist	Calcutta
2.	Dwarka Nath Gupta	Baid	Do
3.	Rajkisto Dey	Kaist	Do
4.	Gobind Chunder Goopta	Baid	Do
5.	Kalla Chand Dey	Kaist	Do
6.	Gopal Kishna Gupta	Baid	Do
7.	Chumun Lall	Kaist	Delhi.
8.	Nobin Chunder Mitter	Kaist	Calcutta
9.	Nobin Chunder Mukerjee	Brahmin	Do
10.	Budden Chunder Chowdree	Do	Do
11.	James Pote	Christian	Do

Each of these candidates had attended "three courses of anatomy and physiology, two of actual dissection, three of chemistry, one of natural philosophy, two of materia medica, two of general and medical botany, two of the practice of physic, and two of the principles and practice of surgery, and one of operative surgery."—"This amount of instruction," the examiners remarked, "appears to us to embrace all the essential branches of a complete medical education with the exception of midwifery, for the tuition of which there is no provision in the Institution."

Thus at the time the examiners even did not look upon medical jurisprudence as of importance in medical education.

The examinations commenced on the 30th October and ended on the 9th November, embracing seven days, as none were held from the 3rd to the 6th November. In the first two days the students were examined in anatomy and physiology, and the results were as under :—

ANATOMY AND PHYSIOLOGY.

1.	Umachurn Set	Clear, steady, and satisfactory.
2.	Dwarkanath Gupta	Same as above, but not quite so clear.
3.	Rajkisto Dey	Dito ditto, ditto ditto.
4.	Gobinchunder Gupta	Pretty good, but apt to be hasty and unreflecting in his answers.
5.	Kallachand Dey	Some of his answers very good, others given without due reflection. A good anatomist.
6.	Gopalchunder Gupta	Apparently of a slow turn, his average answers good but apt to get confused.
7.	Chumun Lall	Cool, collected and very correct answers. A good anatomist.
8.	Nobinchunder Mitter	Evidently a young man of superior acquirements. All his answers excellent though he has naturally a diffident manner.
9.	Nobinchunder Mookerjee	His answers generally satisfactory.
10.	Buddenchunder Chowdree	Ditto, ditto ditto, ditto.
11.	James Pote	Pretty much the same, but slowish.

On the 3rd and the 4th day examinations were held in chemistry and pharmacy with the following result, the names of Budden Chunder Chowdree and James Pote are not seen in the list, as they had voluntarily withdrawn from further examination.

CHEMISTRY AND PHARMACY.

1.	Umachurn Set	Most admirable. Steady, satisfactory and reflective.
2.	Dwarkanath Gupta	Admirable. Steady, satisfactory, and reflective.
3.	Rajkisto Dey	Ditto, ditto, ditto, cool and collected.
4.	Gobind Chunder Gupta	Some of his answers good, others careless and unreflecting ; failed in definition of objects. Remanded to his studies for six months.
5.	Kallachand Dey	Answered very satisfactorily ; but apt to be hurried.

6.	Gopal Kishna Gupta ...	Some of his answers good, but wanting in clearness generally, and apt to be confused. Remanded to his studies for six months.
7.	Chumun Lall	Steady, collected, and excellent replies, and shewed himself a better chemist than was supposed.
8.	Nobinchunder Mookerjee ...	Answered extremely well throughout.
9.	Nobinchunder Mitter ...	Excellent, knows his subject thoroughly.

Besides by the remandment of Gobind Chunder Gupta and Gopal Chunder Gupta, the list was further reduced by the voluntary withdrawal of Kalla Chand Dey, Chumun Lall and Nobin Chunder Mookerjee; so that of the original eleven candidates, Uma Churn Set, Dwarka Nath Gupta, Rajkisto Dey and Nobin Chunder Mitter were the only ones who remained for further examination, which was to be on the most essential subjects, viz., Medicine and Surgery. The results of their examination in these subjects were very satisfactory and are given as follows:—

MATERIA MEDICA AND PRACTICE OF PHYSIC.

1.	Umachurn Set	Most satisfctory in every respect, evincing thorough knowledge of the subject.
2.	Rajkisto Dey	Ditto ditto ditto.
3.	Dwarkanath Gupta	Ditto ditto ditto.
4.	Nobinchunder Mitter ...	He was examined for two hours very searchingly and exhibited excellent knowledge of his subject, but somewhat obscured by a diffidence of manner already alluded to. He has been employed for sometime as Apothecary to the little Hospital attached to the College, and has given great satisfaction.

PRACTICE OF SURGERY AND OPERATIONS.

1.	Umachurn Set	Very satisfactory.
2.	Rajkisto Dey	Ditto ditto.
3.	Dwarkanath Gupta	Ditto ditto.
4.	Nobinchunder Mitter ...	Ditto ditto.

The examiners were so highly satisfied with these young men in every respect that in their letter to Government giving the results of their labors, they remarked,—" In one year less than the period assigned in the general orders of 28th January 1835, these young men have by diligent application, as well as by the exertion of uncommon ability, acquired such a measure of general medical knowledge, as to bear them creditably through a very rigid examination."* They accordingly recommended them to to the liberal consideration of Government, as the first Hindoos who, rising superior to the trammels of prejudice and obstacles of no ordinary character, have distinguished themselves by attaining to complete Medical Education upon enlightened principles." They urged the expediency of a liberal scale of pay, and considered Rs. 100 as the most suitable remuneration at the outset, which "might be increased in progress of time according to extent of service and desert." The Government in reply expressed gratification at the result of the examination which evinced a scale of qualification of a very high order, and authorized the granting of Certificates to the four youths who had attained that qualification.

The Certificate, called also Diploma or Letter Testimonial, ran as follows:—

MEDICAL COLLEGE OF BENGAL.

INSTITUTED

IN THE YEAR OF THE CHRISTIAN ERA,

1835:

CORRESPONDING TO THE BENGAL ERA,

1242.

We the undersigned having fully and carefully examined

———— *of* ———— *on the* ———— *of* ————

do hereby certify, that he possesses an intimate knowledge of Anatomy, Physiology, Chemistry and Materia Medica, and that he is sufficiently versed in the Principles and Practice of Medicine and Surgery, to qualify him for holding public Medical Employment, or for commencing independent practice. We have further received satisfactory proof of his diligence and good conduct during his education at the Medical College of Bengal.

This was signed by the Examiners, by the Professors of the College, by the Secretary to the College, by the President of the

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* "Nevertheless," they immediately added, "as a general rule, we consider that the period of study should not to be less than four years, save as respects any of the original eleven candidates who appeared before us on the 30th October and two following days, who at the end of the six months' probation to which we remanded two of than, and which others of their own accord fell back upon, may become candidates again for letters testimonial; we should also suggest that in future each student should attend at least three courses of the practice of surgery, three of the practice of physic and materia medica, and two of operative surgery."

Committee of Public Instruction, and by the Secretary to the Government in the General Department.

The ceremony of conferring these letters testimonial took place in the College Theatre in January 1839. "Sir Edward Ryan, the Chief Justice, presided in his capcity of President of the General Committee of Public Instruction, and a very large body of European and Native Gentlemen of high respectability were present on the occasion."

After the conclusion of the ceremony Dr. John Grant gave his admonition to the young men, in language at once eloquent and impressive. While congratulating them upon their success, he reminded them that they must be students all their lives, for even if they were to attain to the utmost limits of human existence, Nature would still have something new to unfold, something which it would not merely be graceful to know, but absolutely necessary to understand. He then reminded them of their fourfold duties,—to the sick, to the profession, to Society at large, and to Government. The duty towards the sick was synomymous with humanity. The duty towards the profession was simple—it was to cherish a brotherly and generous feeling. The duty towards Society was summed up in fitness a practitioners, modesty of demeanor, self-control, and great discretion and genuine disinterestedness. The duty to Government was performed by faithful, honest, and zealous service. The orator then concluded in the following eloquent words:—

" Go forth in the strength of a good cause and earn for yourselves an honorable name in an (to you) untried path. As I have said, you are the first fruits of a great experiment; that of enfranchising the native mind from ignorance and dark prejudices. Recollect that the success to a certain extent of this most interesting experiment depends upon *your* future career. A false step on *your* part might be productive of disastrous consequences to the great cause of native education, to say nothing of the mortification which any misconduct, or failure of yours, would inflict upon your teachers, and upon *us*, your god-fathers, as I may say, in the profession. Farewell! and may prosperity and happiness crown your honest endeavours.

Acknowledgements.

A Manual of Fever for the use of Students and Practitioners. By Hurro Nauth Roy, Graduate of the Medical College of Bengal. Calcutta: Wyman & Co. 1873.

Complete Repertory to the Homœopathic Materia Medica. Diseases of the Eyes. By E. W. Berridge, M. D. 2nd Edition. London: Alfred Heath. 1873.

We shall take an early opportunity of reviewing these works.

CLINICAL RECORD.

A Case of Caries of the 8th Rib (Left). Recovery.

UNDER CARE OF DR. M. L. SIRCAR.

Babu P. C. B., aged 33, school-master by profession, came to me on the 12th March, for the following complaints:—A sinus on the back 2 inches to the left of the median line and 3½ inches below the inferior angle of the scapula. There was an ichorous discharge from the sinus. The skin around it was dirty red and adherent to the subjacent tissues which again were adherent to the bone beneath (8th rib). The part was painful. The patient could not lie on his back, especially on the left side, without feeling a good deal of pain. There was a tendency to diarrhœa. The history of the case is as follows:—The patient is of scrofulous constitution. Several cicatrices in the neck, indicative of previously existing suppuration of the glands. In November 1872, when at Baruipur patient felt pain at the spot of the back defined above. This pain was at first felt only when lying on back; after some time it was felt in all positions. The part was painted with *tincture of iodine;* when he came to his native village Baraset he had it examined by the doctor in charge of the station, according to whose advice *compound iodine ointment* was applied for some time. This producing no beneficial effect, he took *Hep. s.* 6 which seemed to relieve the pain for a short time, but the pain returned in an aggravated form and a deep-seated abscess was diagnosed. The abscess was opened on the 20th January of this year. A quantity of thick, apparently healthy pus came away. There was some bleeding. The ulcer was treated at first with warm water injection and application of lint, but, showing no tendency to heal, iodine with water, instead of simple water, was used as injection, and *iodide of potassium* was given internally. Still there being no tendency to heal, *carbolic acid* was substituted for the *iodine* in the injection. No improvement following, the doctor made a careful examination on the 10th March, and discovered caries of the rib. The patient, taking fright at this diagnosis, came to me on the 12th. I gave him *sil.* 12 and from that day improvement commenced. Discharge gradually diminished, and there was marked relief in the pain. In less than a month the sinus closed and the patient could lie on his back without feeling any pain. After the closure of the sinus, there was once or twice, some oozing of humor from the part, owing to some indiscretion on the part of the patient. He is now however quite well for upwards of two months.

Remarks.

Any comment on this case is superfluous. It clearly demonstrates the wonderful curative influence *silicea* exerts in caries of bones and the utter uselessness, to say the least of them, of irritating lotions, and injections. Without the proper internal remedies, they are not only useless, but prove, as we have often found, very injurious by keeping up a continual irritation in the affected parts, which, to return to their normal condition, require rest, and sometimes absolute rest.

Gleanings from Contemporary Literature.

MAN AND APES.

By St. George Mivart, F.R.S.

* * * * *

Having completed our survey and summary of the structural resemblances and differences presented by the different forms of Primates, we may now consider and endeavour to appraise their value, as bearing upon the question of the "Origin of Species," and especially upon the asserted "descent of man" from some "non-human" Ape ancestor. The question, that is, as to man's body; for as to the totality of his nature no mere anatomical examinations will enable us to decide—that is the task of psychology and philosophy generally.

In the first place it is manifest that man, the Apes, and Half-Apes cannot be arranged in a single ascending series, of which man is the term and culmination.

We may, indeed, by selecting one organ, or one set of parts, and confining our attention to it, arrange the different forms in a more or less simple manner. But, if all the organs be taken into account, the cross relations and interdependencies become in the highest degree complex and difficult to unravel.

This has been more or less generally recognised; but it has been put forward by Mr. Darwin,* and widely accepted, that the resemblances between Man and Apes are such that Man may be conceived to have descended from some ancient members of the broad-breast-boned group of Apes, and Gorilla is still popularly credited with the closest relationship to him which is to be found in all existing Apes.

As to the latter opinion, evidence has been here adduced to show that it is quite untenable.

As to Mr. Drawin's proposition, much remains to be said. But it is certainly true that on the whole the anatomical characters of man's body have much more resemblance to those common to the latisternal group than to those presented by any other section of the order Primates.

But, in the first place, we should consider what evidence of common origin does community of structure afford?

The human structural characters are shared by so many and such diverse forms, that it is impossible to arrange even groups of genera in a single ascending series from the Aye-Aye to man (to say nothing of so arranging the several single genera), if all the structural resemblances are taken into account.

On any conceivable hypothesis there are many similar structures, each of which must be deemed to have been independently evolved in more than one instance.

If the number of wrist bones be deemed a special mark of affinity between the Gorilla, Chimpanzee, and man, why are we not to consider it also a special mark of affinity between the Indris and man? That it should be so considered, however, would be deemed an absurdity by every evolutionist.

If the proportions of the arms speak in favour of the Chimpanzee, why do not the proportions of the legs serve to promote the rank of the Gibbons?

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* "Descent of Man," vol. i. p. 197.

If the "bridging convolutions" of the Orang go to sustain its claim to supremacy, they also go far to sustain a similar claim on the part of the long-tailed, thumbless Spider Monkeys.

If the obliquely-ridged teeth of Simia and Troglodytes point to community of origin, how can we deny a similar community of origin, as thus estimated, to the Howling Monkeys and Galagos?

The liver of the Gibbons proclaims them almost human; that of the Gorilla declares him comparatively brutal.

The ear lobule of the Gorilla makes him our cousin; but his tongue is eloquent in his own dispraise.

The slender Loris from amidst the Half-Apes, can put in many a claim to be our shadow refracted, as it were, through a Lemurine prism.

The lower American Apes meet us with what seems "the front of Jove himself," compared with the gigantic but low-browed denizens of tropical Western Africa.

In fact, in the words of the illustrious Dutch naturalists, Messrs. Schroeder Van der Kolk, and Vrolik,* the lines of affinity existing between different Primates construct rather a network than a ladder.

It is indeed a tangled web, the meshes of which no naturalist has as yet unravelled by the aid of natural selection. Nay, more, these complex affinities form such a net for the use of the teleological retiarius as it will be difficult for his Lucretian antagonist to evade, even with the countless turns and doublings of Darwinian evolutions.

But, it may be replied, the spontaneous and independent appearance of these similar structures, is due to "atavism" and "reversion"—to the reappearance, that is, in modern descendants, of ancient and sometimes long-lost structural characters, which formerly existed in more or less remote hypothetical ancestors.

Let us see to what this reply brings us. If it is true and if Man and the Orang are diverging descendants of a creature with certain cerebral characters, then that remote ancestor must also have had the wrist of the Chimpanzee, the voice of a long-armed Ape, the blade-bone of the Gorilla, the chin of the Siamang, the skull-dome of an American Ape, the ischium of a slender Loris, the whiskers and beard of a Saki, the liver and stomach of the Gibbons, and the number of other characters before detailed, in which the various several forms of higher or lower Primates respectively approximate to Man.

But to assert this is as much as to say that low down in the scale of Primates was an ancestral form, so like man that it might well be called an *homunculus*; and we have the virtual pre-existence of man's body supposed, in order to account for the actual first appearance of that body as we know it—a supposition manifestly absurd if put forward as an explanation.

Nor if such an *homunculus* had really existed, would it suffice to account for the difficulty. For it must be borne in mind that man is only one of many peculiar forms. The body of the Orang is as exceptional in its way as is that of man in another. The little Tarsier has even a more exceptional structure than has man himself. Now, all these exceptional forms show cross relations and complex dependencies as involved and puzzling as does the human structure, so that in each several case we should meet with a similar network of difficulties, if we sought to account for existing structural characters through the influence of inheritance and natural selection.

It may be replied that certain of these characters have arisen in total independence, and this reply is no doubt true; but how are we to discriminate between those which are inherited and those which are independently acquired? Structures like strong teeth or powerful claws, obviously useful in the struggle for life, may well be supposed to have independently appeared, and been preserved time after time; but what characters could well be thought, *à priori*, less likely to be independently acquired than a more or less developed chin, such as a Man shares with the Siamang alone or a slightly aquiline nose, such as that found in the Hoolock Gibbon and often in the human species? Can either character be thought to have preserved either species in the struggle for life, or have persistently gained the hearts of successive generations of female Gibbons? Certainly seductiveness of this sort will never explain the arrangement of the lobes of the liver, or the presence of an oblique ridge on the grinding surfaces of the back teeth.

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* "Nat. Hist. Review," vol. ii. p. 117.

Again, can this oblique ridge of the grinding teeth be supposed to have arisen through life necessities? and yet, if it is a real sign of genetic affinity, how comes it to be absent from the man-like Gibbons, and to reappear for the first time in American Apes, and among others in the aberrant and more or less baboon-like Howling Monkeys?

The same remark applies to the condition of wrist bones of man, the Chimpanzee, and Indris. If this condition arises independently, and is no mark whatever of genetic affinity, what other single character can with certainty be deemed to be valid evidence of affinity of the kind?

But if the foregoing facts and considerations tell against a belief in the origin of Man and Apes, by the purely accidental preservation in the struggle of life of minute and fortuitous structural variations, do they tell against the doctrine of evolution generally?

To this question it must be replied that, if we have reason to think an innate law has been imposed upon nature, by which new and definite species, under definite conditions, emerge from a latent and potential being into actual and manifest existence, then the foregoing facts do not in the least tell against such a conception—a conception, that is, of a real and true process of "evolution" or "unfolding."

For there is no conceivable reason why these latent specific forms should not have the most complex and involved relationships one to another; similar structures independently appearing in widely different instances.

Analogy drawn from the inorganic world is all in favour of such latent potentialities, and the process of development of every individual animal is the unmistakeable manifestation of actual organic evolution and emergence of real from potential existence in each separate case.

It has recently been strongly asserted by Dr. H. Charlton Bastian,* that organic nature does manifestly contain within it these innate powers of developing new definite forms, more or less like those existing in inorganic nature, as evidence by crystallisation.

He has given detailed descriptions† of the most strange and startling direct transformations amongs the lower animals, including the direct evolution of Rotifers and Nematoid worms. Moreover, the evidence of the occurrence of sudden and direct transformations does not repose on Dr. Bastian's observations alone. Similar phenomena have been observed by M. Pineau, Mr. Jules Haime, M. T. C. Hildyard, Mr. Metcalf Johnson, Dr. Gros, and M. Nicolet.‡

It would be difficult and eminently unscientific summarily to reject such an accumulation of evidence. To do so simply on an account of *à priori* prejudice, reposing upon nothing better than negative testimony, would be in the highest degree unphilosophical.

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* "The Benginnings of Life," 1872.

† L. c. vol. ii. pp. 307—540

‡ For an account of their observations and references to their original statements, see "Bastian," Op. cit., vol. ii. pp. 493-527.

Moreover, we have of late years become acquainted with the remarkable fact of the occasional sudden transformation of a certain large Mexican Eft with external gills—the Axolotl—into an animal not only of a different species but of a different genus. Here the whole structure, the arrangement even of certain bones and distribution of the teeth in the jaws becomes transformed without the most careful observations having as yet enabled us to discover what conditions determine in these exceptional cases such a marvellous metamorphosis.

It is true that the Axolotl has characters of immaturity, and that the form ultimatley attained by it is probably the fully-developed condition; but the wonder is thus only increased, since while the ordinary and immature Axolotls breed freely, the rarely developed adults are absolutely sterile.

To return from this digression, however, to the question of the cause and mode of specific origin. I have elsewhere* endeavoured to show, by many different facts, what the teaching of nature as to such origin—namely, that very frequently indeed similarity of structure may arise without there being any genetic affinity between the resembling forms,† as also that it is much rather to an internal cause of principle,‡ than to any action of surrounding external conditions that the origin of new specific forms is due.

The characters and relations exhibited to us by the history of the highest order of mammals—the order Primates, common to us and to the Apes—seems then not only fully to corroborate, but to accentuate and intensify the arrangements advanced in the "Genesis of Species" in support of what the author believes to be the more philosophical conception of the cause and nature of "specific genesis" generally.

Not only is there abundant reason to believe that Apes and Half-Apes have little if any closer genetic affinity than they have either with Lions or with Whales; but there is much evidence to support the belief that the Apes of the Old and of the New Worlds respectively (the *Simiadæ* and *Cebidæ*) have been created independently one of the other, and that the various common characters they exhibit are but parallel adaptive modifications, due simply to similarity as to the exigencies of life to which they are respectively exposed.

Fossil remains, as yet unknown, may bridge over the gulf at present existing between these families. It would be a bold thing to positively affirm that such will not be discovered when we reflect how very few are the extinct animals known to us compared with the vast multitudes which have existed, how very rarely animal remains are fossilized, and how very rarely again such fossils are both accessible and actually found. Nevertheless, the author believes that it is far more likely that tropical geological explorations may reveal to us latisternal Apes more human than any now existing, rather than that it will bring to our knowledge forms directly connecting the *Simiadæ* and *Cebidæ*.

To return from this digression, the question may be asked, "What is the bearing of all the foregoing facts on the origin and affinities of man?"

Man being, as the mind of each man may tell him, an existence not only conscious, but conscious of his own consciousness; one not only acting on inference, but capable of analysing the *process* of inference, a creature not only capable of acting well or ill, but of understanding the ideas "virtue" and "moral obligation" with their correlatives freedom of choice and responsibility—man being all this, it is at once obvious that the principal part of his being is his mental power.

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* "Genesis of Species," 2nd edition, 1872.

† "Genesis of Species," p. 71, chap. iii. on the co-existence of closely similar structures of diverse origin.

‡ Op. Cit. p. 271. chap. xi., on Specific Genesis.

> In Nature there is nothing great but Man,
> In Man there is nothing great but Mind.

We must entirely dismiss, then, the conception that mere anatomy by itself can have any decisive bearing on the question as to man's nature and being as a whole. To solve this question, recourse must be had to other studies; that is to say, to philosophy, and especially to that branch of it which occupies itself with mental phenomena—psychology.

But if man's being as a whole is excluded from our present investigation, man's body considered by itself, his mere "massa corporea," may fairly be compared with the bodies of other species of his zoological order, and his corporeal affinities thus estimated.

Let us suppose ourselves to be purely immaterial intelligences, acquainted only with a world peopled like our own, except that man had never lived on it, yet into which the dead body of a man had somehow been introduced. We should, I think, consider such a body to be that of some latisternal Ape, but of one much more widely differing from all the others than such others differ one from another amongst themselves. We should be especially struck with its vast brain, and we should be the more impressed by it when we noted how bulky was the body to which that brain belonged. We should be so impressed because we should have previously noted that, as a general rule, in backboned animals, the larger the bulk of the body the less the relative size of the brain. From our knowledge of the habits and faculties of various animals in relation to their brain structure, we should be led to infer that the animal man was one possessing great power of coordinating movements, and that his emotional sensibility would have been considerable. But above all, his powers of imagination would have been deemed by us to have been prodigious, with a corresponding faculty of collecting, grouping, and preserving sensible images of objects in complex and coherent aggregations to a degree much greater than in any other animal with which we were before acquainted. Did we know that all the various other kinds of existing animals had been developed one from another by evolution; did we know that the numerous species had been evolved from potential to actual existence by implanted powers in matter, aided by the influence of incident forces; then we might reasonably argue by analogy that a similar mode of origin had given rise to the exceptional being, the body of which we were examining.

If, however, it were made clear to us—immaterial intelligences—that the dead body before us had been, in life, animated, not by a merely animal nature, but by an active intelligence like our own, so that the difference between him and all other animals was not a difference of degree but of *kind*—if we could be made to understand that its vast power of collecting and grouping sensible images served but to supply it with the materials made use of by its intelligence to perceive, not merely sensible phenomena, but also abstract qualities of objects—if we became aware that the sounds uttered by it in life were not exculsively emotional expressions, but signs of general conceptions (such as predominate in the language of even the lowest savage), then the aspect of the question would be entirely altered for us.

We should probably decide that if the body before us seemed to us to be so little related to the informing rational soul that its existence anterior to and independent of such rational soul was quite conceivable and possible, then its origin by process of natural evolution would, indeed, also be conceivable and indeed *à priori* probable.

But if, on the other hand we were convinced, from whatever reason, that was inconceivable and impossible for such a body to be developed or exist without such informing soul, then we should with perfect reason and logic affirm that as no natural process would account for the entirely different kind of soul—one capable of articulately expressing general conceptions*—so no merely natural process could account for the origin of the body informed by it—a body to which such an intellectual faculty was so essentially related.

Dropping now the metaphor of immaterial spirits, it seems that the answers supposed to be given by such spirits must be the answers really given by sincere and unbiassed investigators in the combined spheres of Zoology and Anthropology.

But however near to Apes may be the body of man, whatever the kind or number of resemblances between them, it should always be borne in mind that it is to no one kind of Ape that Man has any special or exclusive affinities—that the resemblances between him and lower forms are shared in not very unequal proportions by different species; and be the preponderance of resemblance in which species it may, whether in the Chimpanzee, the Siamang or the Orang, there can be no question that at least such preponderance of resemblance is *not* presented by the much vaunted Gorilla, which is no less a brute and no more a Man than is the humblest member of the family to which it belongs.—*Popular Science Review*, July 1873.

ON THE INTRODUCTION OF GENERA AND SPECIES IN GEOLOGICAL TIME.†

By J. W. Dawson, LL. D., F. R. S., F. G. S.,

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There can be no doubt that the theory of evolution, more especially that phase of it which is advocated by Darwin, has greatly extended its influence, especially among young English and American naturalists, within the few past years. We now constantly see reference made to these theories, as if they were established principles, applicable without question to the explanation of observed facts, while classifications notoriously based on these views, and in themselves untrue to nature, have gained currency in popular articles and even in text-books. In this way young people are being trained to be evolutionists without being aware of it, and will come to regard nature wholly through this medium. So strong is this tendency, more especially in England, that there is reason to fear that natural history will be prostituted to the service of a shallow philosophy, and that our old Baconian mode of viewing nature will be quite reversed, so that instead of studying facts in order to arrive at general principles, we shall return to the mediæval plan of setting up dogmas based on authority only, or on metaphysical considerations of the most flimsy character, and forcibly twisting nature into conformity with their requirements. Thus "advanced" views in science lend themselves to the destruction of science, and to a return to semi-barbarism.

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* "It is not emotional expressions or manifestations of sensible impressions, however exhibited, which have to be accounted for, but the enunciation of distinct deliberate judgments as to 'the what,' 'the how,' and 'the why,' by definite articulate sounds; and for these Mr. Darwin not only does not account, but he does not adduce anything even tending to account for them." "Quarterly Review," July 1871. Article, "The Descent of Man," p. 79.

† Forming portions of the President's Annual Address.

In these circumstances, the only resource of the true naturalist is an appeal to the careful study of groups of animals and plants in their succession in geological time. I have myself endeavoured to apply this test in my recent report on the Devonian and Silurian flora of Canada, and have shown that the succession of Devonian and Carboniferous plants does not seem explicable on the theory of derivation. Still more recently, in a memoir on the Post pliocene Deposits of Canada, now in course of publication in the "Canadian Naturalist," I have by a close and detailed comparison of the numerous species of shells found embedded in our clays and gravels, with those living in the Gulf of St. Lawrence and on the coasts of Labrador and Greenland, shown, that it is impossible to suppose that any changes of the nature of evolution were in progress; but, on the contrary, that all these species have remained the same, even in their varietal changes, from the Post-pliocene period until now. Thus the inference is that these species must have been introduced in some abrupt manner, and that their variations have been within narrow limits and not progressive. This is the more remarkable, since great changes of level and of climate have occurred, and many species have been obliged to change their geographical distribution, but have not been forced to vary more widely than in the Post pliocene period itself.

Facts of this kind will attract little attention in comparison with the bold and attractive speculations of men who can launch their opinions from the vantage ground of London journals; but their gradual accumulation must some day sweep away the fabric of evolution, and restore our English science to the domain of common sense and sound induction. Fortunately, also, there are workers in this field beyond the limits of the English-speaking world. As an eminent example we may refer to Joachim Barrande, the illustrious palæontologist of Bohemia, and the greatest authority on the wonderful fauna of his own primordial rocks. In his recent memoir on those ancient and curious crustaceans, the Trilobites, published in advance of the supplement to vol. i. of the Silurian system of Bohemia, he deals a most damaging blow at the theory of evolution, showing conclusively that no such progressive development is reconcileable with the facts presented by the primordial fauna. The Trilobites are very well adapted to such an investigation. They constitute a well marked group of animals trenchantly separated from all others. They extend through the whole enormous length of the Palæozoic period, and are represented by numerous genera and species. They ceased altogether at an early period of the earth's geological history, so that their account with nature has been closed, and we are in a condition to sum it up and strike the balance of profit and loss. Barrande, in an elaborate essay of 282 pages, brings to bear on the history of these creatures his whole vast stores of information in a manner most conclusive in its refutation of theories of progressive development.

It would be impossible here to give an adequate summary of his facts and reasoning. A mere example must suffice. In the earlier part of the memoir he takes up the modifications of the head, the thorax, and the pygidium or tail piece of the Trilobites in geological time, showing that numerous and remarkable as these modifications are, in structure, in form, and in ornamentation, no law of development can be traced in them. For example, in the number of segments or joints of the thorax, we find some Trilobites with only one to four segments, others with as many as fourteen to tweenty-six, while a great many species have medium or intervening numbers. Now in the early primordial fauna the prevalent Trilobites are at the extremes, some with very few segments, as *Agnostus*, others with very many, as *Paradoxides*. The genera with the medium segments are more characteristic of the later faunas. There is thus no progression. If the evolutionists holds that the few-jointed forms are embryonic, or more like to the young of the others, then on his theory they should have precedence, but they are contemporary with forms having the greatest number of joints, and Barrande shows that these last cannot be held to be less perfect than those with the medium numbers. Further, as Barrande well shows, on the principle of survival of the fittest, the species with the medium number of joints are best fitted for the struggle of existence. But in that case the primordial Trilobites made a great mistake in passing at once from the few to the many segmented stage, or *vice versâ*, and omitting the really profitable condition which lay between. In subsequent times they were thus obliged to undergo a retrograde evolution, in order to repair the error caused by the want of foresight or precipitation of their earlier days. But, like other cases of late repentance, theirs seems not to have quite repaired the evils incurred ; for it was after they had fully attained the golden mean that they failed in the struggle, and finally became extinct. "Thus the infallibility which these theories attribute to all the acts of matter organising itself is gravely compromised," and this attribute would appear not to reside in the trilobed tail any more than according to some in the triple crown.

In the same manner, the palæontologist of Bohemia passes in review all the parts of the Trilobites, the succession of their species and genera in time, the parallel between them and the Cephalopods, and the relations of all this to the primordial fauna generally. Everywhere he meets with the same result ; namely, that the appearance of new forms is sudden and unaccountable, and that there is no indication of a regular progression by derivation. He closes with the following somewhat satirical comparison, of which I give a free translation :—"In the case of the planet Neptune, it appears that the theory of astronomy was wonderfully borne out by the actual facts as observed. This theory, therefore, is in harmony with the reality. On the contrary, we have seen that observation flatly contradicts all the indications of the theories of derivation with reference to the composition and first phases of the primordial fauna. In truth, the special study of each of the zoological elements of that fauna has shown that the anticipations of the theory are in complete discordance wiih the observed facts. These discordances are so complete and so marked that it almost seems as if they had been contrived on purpose to contradict all that these theories teach of the first appearance and primitive evolution of the forms of animal life."

The testimony is the more valuable, inasmuch as the annulose animals generally, and the Trilobites in particular, have recently been a favourite field for the speculations of our English evolutionists. The usual *argumentum ad ignorantiam* deduced from the imperfection of the geological record, will not avail against the facts cited by Barrande, unless it could be proved that we know the Trilobites only in the last stages of their decadence and that they existed as long before the Primordial as this is before the Permian. Even this supposition, extravagant as it appears, would by no means remove all the difficulties.—*Quarterly Journal of Science*, July 1873.

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THE MATERIA MEDICA.

30.—China (Cinchona)

(Continued from p. 248).

Hypochondria :—

415. Pressure, with cutting in the region of the spleen, as if the spleen were indurated.
. Sharp stitches in the left side of the epigastrium, close under the ribs, from within outwards, more violent during an inspiration (after 7 h.).
. Splenetic stitches even when walking slowly.
. Pinching stitches in the left hypochondriac region (after 1½ h.).
. Obstruction of the spleen.
420. Continuous stitches under the right ribs, in the region of the liver, neither lessened nor made worse by either inspirations or expirations (after 4 h.).
. Violent stitches from within outwards in the region of the liver, only during expiration (after 5 h.).
. Attacks of pressure in the region of the liver, when standing, coming and going, passing off when bending the body forwards; when touching the parts they are painful, as from subcutaneous ulceration (after 5 h.).
. Obstructions of the liver.

Abdomen:—

.. Pressure, with sensation as of stitching, in several parts of the epigastrium, in the morning when in bed (four days in succession).

425. Severe cutting in the umbilical region, with cold sweat in the forehead, for a quarter of an hour; (in a few minutes).

. Indurations in the abdomen.

. Indurations of the intestines.

. Sensation as if the epigastrium had been pressed into a narrower space.

. Colic in the umbilical region, accompanied with shuddering.

430. Painful distention of the abdomen and especially the hypogastrium.

. Distention of the abdomen, without flatulence.

. Fulness of the abdomen.

. Obstinate distention of the abdomen, causing anxiety.

. Bloatedness of the abdomen from flatulence.

435. Flatulence with frequent emission.

. Tympanitis.

. Distention of the abdomen, as if from too much drinking or bloating aliments.

. Distention of the abdomen, colic, and diarrhœa.

. Attacks of hardness, distention and pains of the abdomen.

440. Troublesome, tensive distention of the abdomen.

. Swelling of the abdomen.

. Ascites.

. Rumbling in the abdomen.

. Rumbling in the Epigastrium.

445. Cracking in the left side of the abdomen, backwards and downwards, apparently in the descending colon.

. Grunting in the abdomen.

. Horrid colic.

. Colic with violent thirst.

. Scorbutic colic.

450. Ineffable colic.

. Flatulent colic.

. Flatulent colic in the hypogastrium: the lowermost intestines feel constricted, the flatulence endeavors in vain to escape, causing aching and tensive pains; even under the short ribs this tension and an anxiety are felt in consequence.

. Pressure in both sides of the abdomen, as if stool would come on and could not be expelled.

. Cramp-pain in the abdomen, composed of pressure and constriction.

455. Pressure and heaviness in the abdomen.

. Pinching in the hypogastrium, with increase of hunger and faintness.

. When a flatus is about to be emitted, the abdomen is pinched together, causing violent pain.

. Pinching pricking pains in the abdomen.

. Shooting stitches in the stomach and abdomen.

460. Desire for stool resulting merely in emission of flatulence.

. Colic previous to the emission of flatulence.

. Previous to the emission of the flatulence cutting pains dart through the abdomen in all directions.

. Accumulation and subsequent emission of a quantity of flatulence.

. Discharge of violent, fetid flatulence.

465. The abdominal muscles feel bruised.

. Sore pain in the abdominal ring, and sensation as if hernia would protrude through the ring.

. Colic previous to stool.

. Ulcers in the abdomen.

. Inflammation in the abdomen.

470. Heat in the umbilical region.

. Chilliness, with pressure in the abdomen.

. Hard pressure in the left side of the hypogastrium (after 3 minutes.)

. Aching pain in the region of the cœcum (when sitting).

. Violent pain in the abdomen with pressure, in the evening, as if diarrhœa would set in, while sitting. It goes off by walking or when standing.

475. Contractive pain in the abdomen, in the evening when sitting, disappearing already when rising from the chair, and still more when standing or walking.

. On the right side of, and below the umbilicus, a contractive pressure as if there were an induration, when sitting.

. Contraction of the abdomen and the sides, when moving the scalpulæ up or down.

. Pain in the abdomen, a sort of pinching together, and of drawing, mostly when sitting.

. Sensation as of the intestinal canal being contracted, with grunting in the abdomen.

480. Cramp pain in the groin, occurring by starts, when standing.

. Pinching and colicky constriction of the bowels above the umbilicus, when raising himself after stooping.

. A pinching together under the right side of the umbilicus, in the outer parts, as it were, when sitting, in the evening (after 13 h.).

. Violent pinching in the epigastrium, (he had to bend double to obtain relief,) (after 1 h.) alternating with inclination to vomit and tenesmus, accompanied with shaking chills all over ; pressure in the epigastrium after the pinching.

. Pinching-aching pain in the abdomen, when walking, towards evening.

485. Violent pinching in the abdomen, going off when rising from a seat.

. Pinching in the abdomen, moving to and fro, above the mons veneris, as if diarrhœa would come on, with emission of short flatus, when sitting (after 27 h.).

. Throbbing in the right side of the abdomen.
. Excessive stitching, with pressure, on the left side of and below umbilicus, when walking fast, and afterwards (after 2 h.).
. Dull-stitching pain in the region of the right kidney, more violent when bending the body (after 24 h.).
490. Dull stitches in the abdomen, round the left side of the umbilicus and likewise under the right nipple from without inwards (after 1 h.).
. Dull stitches in the lumbar region.
. Stitches darting into the abdomen from above downwards, during an inspiration.
. Colic, frequent attacks, in the umbilical region.
. Drawing pain in the right side of the abdomen, when walking.
495. Emission of a quantity of flatulence, accompanied with drawing in the abdomen during hard stool, which goes off with difficulty (after 48 h.).
. Between 6 and 10 o'clock in the evening, violent grunting and movement of flatulence in the abdomen, with a sensation of pressure, after which the flatulence passes off with a fetid smell.
. Tearing in the umbilicus.
. Excessive tearing on the right side of the umbilicus, towards the groin, in the whole of the lumbar region, diminished when bending the body backwards.
. Tearing and grunting in the abdomen, below the umbilicus.
500. Tearing pain with pressure, on the left side of the mons veneris.
. Increase of the peristaltic motion in the abdomen, accompanied with pressure.
. Fine stitches in the bend of the groin, close to the mons veneris, almost only when walking.
. Drawing, with pressure, when sitting, in the groin, especially in the tendon of the psoas muscle.

Stool:—

. Desire for stool.
505. Stool with colic.
. Diarrhœa of undigested food, a sort of lienteria.
. Soft stool in day time.
. Stool thinner than usual.
. (Diarrhœa, particularly after meal.)
510. (Diarrhœa at night.)
. (Diarrhœa from eating fruits.)
.(Diarrhœa after measles, or during small-pox.)
. Knotty, yellow, soft stool, early in the morning.
. Bilious stool.
515. Frequent, black diarrhœa.
. Violent diarrhœa.
. Diarrhœa; the fæces look as if they were mixed with undigested food; they come off in single fragments (after 12 h.); when he has done, the desire for stool continues yet, but nothing is expelled.

. Three times a soft diarrhœa with a smarting, burning pain in the anus, and with colic before and after stool.

. Thin stool resembling diarrhœa.

520. White stool and dark urine.

. Sensation in the anus, during stool, as if an acrid matter were passing over the parts.*

. Burning and burning itching of the anus (immediately).

. Diarrhœa with burning pain in the anus.

. Stitches in the anus during stool which was mixed with blood.

525. Costiveness and accumulation of fæces in the bowels, with heat in the head and dizziness. (The costiveness produced by bark is a reactive effect of the organism.)

. After long tenesmus stool is expelled with much pressure, the expulsion causing a good deal of pain.

. He has to use his utmost strength to expel the fæces, although they are papescent; this is followed by painful tenesmus.

. Cessation of the evacuations.

. Constipation during the day, and hard stool in the evening.

530. Constipation; hard fæces accumulate in the rectum for a long time.

. Hæmorrhage from the hæmorrhoidal vein.

. Sharp stitches in the lower part of the rectum, especially in the sphincter ani muscle; also during and after stool, stitching drawing for three days.

. Piercing stitches in the anus and rectum, between stool.

. Tingling in the rectum after stool.

535. Tingling in the rectum, with discharge of ascarides.

. Continual burning pain in the rectum, after the siesta.

. Pressure in the rectum.

. Tearings, and tearing jerks in the rectum, when lying in the bed.

. Contractive pain in the rectum, especially when sitting.

540. Stinging pain in the perinæum, especially painful when sitting down.

. Pressing and cutting in the intestines, during and after the emission of a whitish, turbid urine.

. Tingling in the anus.

Urinary Organs:—

. Spasmodically contractive pain from the rectum through the urethra as far as the glans and through the testicles, in the evening.

. Tingling creeping, and itching, in the anus and urethra, with burning in the glands.

545. Burning smarting in the forepart of the urethra, in the evening during micturition.

. Continual burning in the orifice of the urethra, with sore feeling in the border of the prepuce, both being especially painful when the clothes rub against the parts.

. Bubbling sensation in the region of the bulb of the urethra.

. Stitching in the urethra when urinating.

. Painful sensitiveness in the urethra, especially during erection; also perceptible when sitting or rising.

550. Pressing in the bladder after frequent and almost unsuccessful desire to urinate.

. Diminished secretion of urine, the first twelve hours, afterwards increased.

. Feeble stream and slow emission of urine, with frequent desire.

. Frequent micturition.

. Frequent and urgent desire to urinate, the urine coming off involuntarily.

555. Whitish, turbid urine with white sediment.

. The urine is not more copious, but paler, and nevertheless deposits a cloudy sediment (after 3 h.).

. Increased secretion of urine, with burning in the orifice of the urethra.

. Scanty, yellowish-green urine.

. Light-yellow urine, depositing next morning a dirty-yellow, rather loose sediment.

560. Dark-coloured urine, with brickdust sediment (after 24 h.).

. Scanty urine with brick-red sediment, and red, spotted, hard, tense swelling of the foot.

Generative Organs: –

MALE—. Swelling of the spermatic cord and testicle, painful to the touch.

. Drawing pain in the testicles.

. A sort of tearing pain in the left testicle and the left side of prepuce, in the evening when in bed.

565. Stinging itching of the scrotum.

. Itching creeping in the scrotum, in the evening when in bed, obliging him to rub the part.

. Darting pain between the glans and prepuce, when walking.

. Pressing pain in the glans, before micturition.

. Itching of the glans, in the evening when in bed.

570. Fine pricking in the frænulum, becoming more painful when touching the part, the pain then becoming stitching and tensive; no change could be discovered externally.

. Burning pain in the orifice of the urethra, during and after micturition.

. Continual burning in the orifice of the urethra.

. The scrotum hangs down low.

. Frequent erections.

575. Nightly pollutions.

. Copious and involuntary emission of semen in the night at 3 o'clock.

. Increased sexual instinct.

FEMALE—. The existing menses were converted into metrorrhagia; the blood coming off in black lumps. (This appears to be the primary effect of Cinchona; hemorrhages from the nose from the mouth and from the lungs are rather frequent primary effects of Cinchona.)

. Suppression of the menses. (Secondary effect.)

Cold, Catarrh:—

580. A few violent dry sneezings (after 7 h.).
. Sneezing with coryza.
. Watery discharge from the nostril, which is nevertheless obstructed (after 13 h.).
. Coryza with sensitiveness of the nose, pimples on the borders of the nostrils and the septum (after 9 h.).
. Coryza, his nose runs for 2 hours.
585. Symptoms of dry coryza.
. Noisy breathing through the nose.

Respiratory Organs and Chest:—

. The larynx is affected, making the voice to be deeper and less pure when singing or talking.
. Stitches and sensation of roughness in the larynx.
. Sensation as if mucus had accummulated in the larynx.
590. Mucus in the larynx, which he hawks up all the time and which makes the voice hollow and hoarse.
. Hoarse, rough tone of voice.
. A sort of drawing in the trachea, under the larynx after which he is attacked with a fit of cough.
. Whizzing and wheezing in the trachea during respiration.
. The chest feels oppressed during night; wheezing, râling, whizzing in the trachea, without the tenacious mucus obliging him to cough.
595. A sort of suffocative fit, as if the larynx were filled with mucus, especially towards evening and night when waking from sleep.
. Difficult, painful inspiration and quick expiration.
. Inclinations to deep inspirations before dinner.
. Suffocative cough in the night at two and four o'clock (a sort of whooping-cough); she screams, but only after she had had a few fits.
. Asthma.
600. Oppression of the chest.
. Feeling of oppression and uneasiness in the chest, in the evening; he is obliged to take a deep inspiration, and the expiration takes place with a sigh; this relieves the oppression for a few moments, the pulse being weak, scarcely perceptible, and the mood being anxious and impatient.
. Great oppression of the chest in the præcordial region, as if something were digging it up all over (after 4 h.).
. Asthma, with difficult, sometimes râling expiration, (mostly when walking,) and roughness of the chest (after 4 h.).
. Arrest of breathing, for half an hour.
605. Suffocative asthma.
. Fatal oppression of the chest (Cinchona having been given during the cold stage).
. Aching pain in the chest and sore feeling in the larynx from coughing.
. Violent pressure in the sternum after a meal, worse when stooping and raising his arms, while sitting.

. Violent cough immediately after a meal.

610. Tickling, inducing cough, in the evening; he was able to suppress the cough.

. Cough excited by laughter.

. Cough, with bloody mucus.

. An agreeable fulness in the chest, as if one had eaten enough, the saliva having a sweet and pleasant taste (after 1 h.).

. Jactitation of the muscles of the chest, here and there.

615. Pressure on the chest.

. Aching pain in the chest.

. Pressure on the left side near the xiphoid cartilage.

. External pressure in the middle of the sternum, when bending the upper part of the body, also when standing, and disappearing when pressing upon the part (after 26 h.).

. Pressure from within outwards, in the region of the lowest ribs (after 24 h.).

620. When stooping while sitting, he feels a pressure upon the sternum, causing anguish and not allowing to take sufficiently deep breath, going off by raising one's self (after 6 h.).

. Hard-aching pain in the right side of the chest, in the region of the fourth and fifth ribs.

. Drawing pressure in the right side of the chest, when sitting, abating when standing or walking.

. Drawing pain behind the sternum.

. Drawing pain, with pressure, across the lower part of the chest while sitting, the pain causing anguish, and going off when standing or walking.

625. Contractive pain in the right side of the chest, at a small spot in the middle; this pain obliges him to expel the breath suddenly and almost involuntarily.

. When stooping while sitting, one feels a cutting pressure over the chest, increasing and decreasing at intervals, and disappearing when raising one's self, still more when standing and walking.

. Fine stinging on the left side of the chest, with pressure (after 8¼ h.).

. Pleuritic stitch.

. Stitches in the chest, in the morning.

630. Stitches in the the left half of the chest.

. Stitches in the chest, when walking fast, going off when at rest.

. A few violent stitches in the chest, close above the præcordial region, when at rest, especially when reading (after 3¾, 16, 18 h.).

. Pleuritic stitches when sitting and reading.

. Sharp stitches in the thoracic cavity from within outwards, in the region of the sixth and seventh true ribs, uninfluenced by inspiration or expiration (after ¾ h.).

635. Dull stitches in the thoracic cavity from within outwards, at regular intervals, when at rest or in motion, and unifluenced by breathing (after 1 h.).

. Stitching in the right side of the chest, in the region of the fourth rib under the arm, apparently in the pleura, almost like a continuous stitch, going off when pressing upon the parts and when stooping (after 6 h.).

. Sharp stitches between the seventh and eighth left ribs.

. Sharp stitches near the right nipple, from within outwards (after 10 h.).

. Sharp stitches in the sternum, where the ribs join it, on both sides, from without inwards, uninfluenced by respiration (after 2 d.).

640. Sharp stitching pain on the left side and near the xiphoid cartilage and in the pit of the stomach, only during an expiration (after 60 h.).

. Stitches in the left side of the chest (during an expiration) when sitting (after 2 h.).

. Titillating stinging in the left half of the chest, towards the præcordial region.

. Dull stitches in the chest, obliging one to expel the breath.

. Dull stitches in the region of the cartilage of the third and fourth left false ribs, uninfluenced by respiration.

645. Pleuritic stitches with gread heat, strong, hard pulse and staring eyes.

. Fever, after a sort of spurious pleurisy.

. During the cold stage of a fever and ague troublesome cough with stitches in the side.

. Continual desire to hawk up, in the morning after rising, as if caused by the vapor of sulphur, not getting any thing loose for several mornings.

. Suspicious cough.

650. Creeping in one-half of the chest, as if something were crawling about in it.

. Sharp pressure, mingled with creeping, in one side of the chest.

. Pressure on the whole of the front part of the chest, during night, when lying on the back.

. Aching pain in the side of the chest, oppressing respiration.

. Tensive pain, especially in the external muscles of the chest (in the morning).

655. Burning pressure from without inwards, in the whole of the chest.

. Bone-pain in the joint of the ribs, as if bruised, during an inspiration.

. Pain in the side as if bruised, or contused.

. Some stitches through the sternum towards the back, soon after drinking.

. Violent stitches in the pit of the stomach during inspiration.

660. Violent stitches under the last ribs, during an inspiration, arresting the breathing.

. Under the last rib of the right side there is a small spot, causing a stitching pain when walking, or when pressing ever so slightly upon it.

. Stitches in the side during night; in day-time they are only

felt during motion or when touched.
. Boil on the muscles of the chest.
. Throbbing in the sternum, evening and morning.
665. Palpitation of the heart.
. Palpitation of the heart and congestion of blood to the face, which became red and hot accompanied with coldness of the hands (after 1 h.).
. Violent palpitation of the heart, with low pulse and cold skin.
. Violent palpitation of the heart, accompanied with a feeling of anxiety.
. Tearing in the region of the left scapula, during an inspiration.
670. Drawing-tearing pain in the left scapula (after 9 h.).
. Contractive pain between the scapulæ, when standing (after 3 h.).
. Prickings over the right scapula and in the left side of the chest (after ¼ h.).

Back :—
. Red rash on the forepart of the neck, no itching.
. The nape of the neck feels painful during motion.
675. Pain in the nape of the neck, towards the front, when turning the head, as if the glands were swollen, although they are not; the pain increased when touching the parts as if bruised (after a walk).
. Intolerable pain in the small of the back, as if from a cramp, or as if bruised or pounded to fragments; the pain causes one to shriek when making the least motion.
. Creeping itching on the os coccygis, going off only for a short time by rubbing.
. Small stitches in the middle of the spinal marrow (after 5 h.).
. Stitches in the left side of the spine, when sitting.
680. Darting tearing in the left side of the small of the back.
. Violent, stitching drawing pain in the middle of the os sacrum, towards the lumbar vertebra.
. Jerkings above the os sacrum.
. Painful Jerks in the os sacrum.
. Stretching pain in the small of the back, as if from a heavy load or from strong stooping.
685. Slowly drawing stitches in the anterior cervical muscles, when at rest.
. Drawing pain in the lower and right side of the neck, when standing going off when stooping.
. Drawing pains in the nape of the neck.
. Sweat in the nape of the neck and back when moving about ever so little.
. Pain in the back during the least motion, as if bruised.
690. Throbbing and stitching pain in the back.
. Pain in the scapula as if sprained.

Superior Extremities :—
. Paralytic jerking tearing on the top of the shoulder, sensitively painful when touched, and when the pain has passed off, it

can be again excited by contact; it is even excited by the pressure of the coat upon the shoulder. [Cinchona is not only characterized by this, that the pain which it occasions, is increased by motion and especially by touching the affected parts; but it is likewise characterized by this, that the pain, although it may have disappeared for the moment, may be excited again by simply touching the parts, when it frequently becomes horrid and intolerable.]

. Tearing with pressure, in the left axilla, and in the anterior and internal border of the scapula.

. Drawing pain, with pressure, at intervals, in the anterior border of the right axilla (after 3 d.).

695. Paralytic darting tearing, commencing at the head of the humerus, and extending along the muscles and bones as far as the phalanges where it is less painful; at the same time the whole arm is weaker; the pain increases by contact (after 3 h.).

. Stitching pains in the upper arm, disappearing as soon as the arm is moved (after ¾ h.).

. Darting tearing in the humerus, upwards and inwards (after 2 h.).

. Tearing, first in the left, afterwards in the right, upper arm (after ½ h.).

. Paralytic pain in the right upper arm, commencing at the head of the humerus and terminating in the hand, in the shape of a fine and weak tearing, the rest of the body, especially the the forehead being warm (after 8 h.).

700. Paralytic, jerking tearings in the long bones of the upper limbs, more violent during contact (after 1 h.).

. Paralytic jerking in the upper limbs, extending into all the parts thereof, increased by contact more than by motion.

. Stretching of the arms with curbed fingers.

. Weakness in the arms, felt when clenching the hands.

. Tension in the arms and hands.

705. Tearing darting through the left elbow-joint, recurring frequently.

. Tearing and drawing in the arm, when standing near the window.

. Bone-pain, drawing, from the elbow to the fingers, in the evening.

. Stitching in the left elbow-joint.

. Tearing in both ulnæ, more violent when touching the parts.

710. Tearing, to and fro, now in the outer parts of the right, now of the left forearm (going off by friction).

. Drawing pains along the bones of the forearms, as if the periosteum were being scraped with a dull knife.

. Sharp drawing stitching obliquely across the left wrist (evening) (after 13, 14 h.).

. Sensation in the elbow-joint, as if it were ecchymosed.

. Painful drawing in the coronoid of the left ulna, (in the bend of the elbow,) more violent when touching the parts.

715. Tearing in the left elbow-joint, more violent during motion. (after 2 h.).

. When moving the left hand, one feels a drawing pain over the dorsum of the hand, which is swollen.

. When bending the fore-arm, it goes to sleep, with fine stinging in the tips of the fingers.

. Drawing pain in the palm of the hand, obliquely across the roots of the fingers.

. The hand is painful when seizing something, a sort of cramp-like drawing.

720. Tremor of the hands when writing (after 1 h.).

. Jerking tearing in the metacarpal bones and fingers, aggravated by contact.

. Jerking in the metacarpus and wrist.

. Tearing along the line of contact of the metacarpal and carpal bones (after 6 h.).

. The hands are alternately warm and cold.

725. One hand is icy-cold, the other warm.

. Dull stitching in the metacarpal bone of the right index finger.

. Tearing in the last phalangeal bones of the right hand, especially violent in the joints, uninfluenced by motion (after ½ h.).

. Stitching tearing in the anterior joint of the right thumb. [Stitching, lancinating, tearing and stitching-drawing, which is sometimes increased to jerking-tearing appear to be characteristic pains of Cinchona.]

. Jerking tearing in the metacarpal of the right little finger.

730. Jerking tearing in the joints of the fingers (after 24 h.).

. Blue nails.

. The knuckle of the middle-finger is swollen; he is unable to move it, from stiffness and pain.

. Drawing from below upwards, in the left thumb, index and middle finger.

. Darting pain in the external parts of the left little finger.

(To be Continued.)

EDITOR'S NOTES.

DR. ENDEMANN'S ANALYSIS OF THE AIR OF PUBLIC SCHOOLS IN AMERICA.

Seventeen samples of air were examined, and the carbonic acid varied from 9·7 to 35·7 parts in 10,000; i. e. from more than twice to about nine times the normal quantity. As might be expected, whenever the windows were closed, the ratio of carbonic acid was increased in proportion to the length of time they were kept closed.

M. ONIMUS'S EXPERIMENTS ON A GUILLOTINED SUBJECT.

These experiments, lately submitted to the "Société de Biologie" of Paris, and published in the *Gazette Hebdomadaire* demonstrates the following facts:—The ribs are *raised* by the external, *lowered* by the internal, intercostal muscles. The peroneus longus acts to some extent as an extensor and abductor, and is chiefly concerned in bringing down the internal edge of the foot. The loss of muscular contractility takes place in the following order:—The muscles of the tongue, the diaphragm, and those of the face, except the masseter which holds out long; the extensors fail before the flexors; the muscles of the trunk preserve their excitability longest: This is exactly the order of loss of muscular contractility in lead paralysis.

M. DAVAINE'S EXPERIMENTS ON INOCULATION WITH DEAD BLOOD.

The blood used was that of an ox ten days after slaughter. It was used hypodermically in varying quantities, the attenuations being obtained by successive dilutions in water, as in the preparation of homœopathic medicines. The experiments were performed upon rabbits. Killing one animal, M. Davine would take its infected blood, and inject it into the veins of another, and so on until he reached what he terms the 25th generation. On this last experiment he says—"Four rabbits received respectively one trillionth, one ten-trillionth, one hundred-trillionth, and one quadrillionth of a drop from a rabbit belonging to the preceding generation that had died from the effects of a one trillionth dose. Of the four, but one animal died—that which received the one ten-trillionth. It appears then, that the limit of transmissibility of the poison in the rabbit reaches the one-trillionth of a drop of decayed blood.

REMOVAL OF A FŒTUS FRÔM A HERNIAL SAC.

In the *Obstetrical Journal of Great Britain and Ireland* (July) is given an extract (translated) from the fifth part of "La veritable Chirurgie etablie sur l' experience et la raison, par le Sieur Louis Leger de Gouey," printed at Rouen in 1716, in which is related a remarkable case of removal of a fœtus from a hernial sac. It appears that a young lady of about 21, had come to consult Gouey in 1706 for a tumor in her right groin of about the size of a pullet's egg. The surgeon took it for a venereal *bubo*, and as there was no *pain* in it, he applied nothing, and told the lady not to be anxious about it. But the tumor "increased daily, but without the lady's perceiving such pain as usually precedes the formation of matter." Upon a fresh examination he perceived some unevenness and a pretty considerable pulsation of an artery. He was at a loss to make anything of the tumor. He thought it might be an epiplocele, and the pulsation made him fear there might be aneurism as well. At the end of two months and a half the tumor growing to the size of a loaf of a pound weight, the lady became uneasy and insisted upon something being done. Gouey was anxious to have a consultation, but the lady would not have it, so "he resolved to perform the operation of *Bubonocele*, or the reduction of a rupture in the groin. Having cut through the integument he found a bag of a brown color, which at first sight he took to be a bag formed by a dilatation of the peritoneum forced down by some part of the intestines. Having laid this bag bare, he saw a very manifest pulsation which increased his fears. He ventured to make an incision into the bag, in a place where no pulsation appeared; upon which there flowed out about ¼ pint of pretty clear water, and the tumor diminished much. Then he introduced a probe, by which he guided his scissars, and having laid the bag open found it to be double. The bag being thus opened, there was found in it a small *fœtus* about 6 inches long, and every way big in proportion. It was a *boy* and alive. He baptized it and tyed and cut the *funis umbilicalis* as is usually done. The bag was really a production or dilatation of the peritoneum containing the usual membranes, and the water in which the fœtus lay. The fœtus seemed to be about 3 months old, the mother having perceived the tumor for about 2½ months, and her menses having ceased about the same time."

It is further related that the *funis umbilicalis* being pulled gently, the *placenta* came away easily. Gouey supposed "this ovum after impregnation to have fallen into the abdomen upon one of the *ligamenta teretia* which pass thro' the rings in the oblique muscles of the abdomen; where it found a dilatation of the peritoneum and lodging in it, by the pressure of the bowels; and so forming a perfect hernia by itself, remained in this part, and grew to the size above mentioned"

POISONING BY HYOSCYAMUS.

In a case of accidental poisoning of a female aged 34 by eleven drachms of *Tinct. hyoscyamus* which was taken by mistake for black draught in the morning at 5 a. m. the following symptoms were observed (*Lancet* July 5) :—

Ten minutes after taking the draught she had a hot, burning, pricking sensation in the hand, feet, and legs; became giddy and delirious, and had great dryness of the throat. Sometime after, in attempting to get out of bed, she found her legs powerless.

The body all over had a purple rash, more particularly about the neck and face, which latter was so swollen that she thought it would burst.

At 9 A. M. patient was insensible, unable to speak. The tongue, which, after repeated request, she put out slowly and with great difficulty, was swollen, brown, and very dry. The face was much swollen and scarlet, the color more marked on left cheek, on which it persisted for 4 days, the rash gradually disappearing from other parts of the body on the 2nd day. The pupils were so dilated that the iris appeared as a mere thread-like ring. Skin hot and dry. At this time an ounce of tincture of nut galls was given, followed in two hours by an ounce of castor oil.

The bowels and the bladder acted freely. The fæces were copious, and of a very deep golden-color, with a strong odor of the drug, which was not detectable in the urine.

After this (1 P. M.) she seemed much relieved, was more conscious, was able to speak but very indistinctly, and in answer to questions would say "yes" for "no," and *vice versâ.* Vision so affected that she could not say how many fingers were held up before her. *Motive power* of the lower extremities completely lost, and their *Sensibility* diminished.

4 P. M. Delirious; face more swollen; temp. 104°; pulse 126; sickness troublesome. Mustard plaster to the epigastrium and citrate of potash in the effervescing form. Sickness subsided by 6 P. M.

11 P. M. A most violent fit of shivering, after which she got much exhausted, body cold all over; temp. 97°; pulse 56; had had no sleep for 18 hrs. She had administered to her 1 dr. of liq. opii in 3 ounces of brandy with as much water. In half an hour warmth was considerably restored, and she had five hour's undisturbed sleep.

9 A. M. next day. Temp. 103°; pulse 120, small. Iris half a line in breadth; could read time correctly by the watch. Articulation much more distinct. Saw all sorts of horrid things, particularly when the eyes were closed. Beef-tea and brandy at frequent intervals.

4. P. M. Iris again retracted. Could not read time by watch. Several delusions, one of which was that she had no top to her head, neither could she be pursuaded to feel whether it was the case or not. Citrate of potash with carbonate of ammonia in 5 gr. doses.

11 P. M. seemed much better altogether. Temp. 100°; pulse 104, increased in volume; pupils more contracted. Castor oil, with nitric ether (ʒ ;) and oil of juniper (♏ vi) was given, which had a free effect upon the bowels and bladder. After this she steadily improved, though she continued to complain of weakness of legs and of the memory for some time.

THE CALCUTTA MEDICAL COLLEGE.

V.

No history of the Calcutta Medical College would be complete which would omit to make prominent mention of the munificent patronage which the institution received from at least one enlightened native gentleman. Babu Dwarka Nath Tagore, with his characteristic liberality, and enlightened zeal, wrote to Principal Bramley on the 24th March 1836, as follows :—

> "I am unwilling to offer you my congratulations upon the success which has attended your undertakings in the Medical College, without showing that my feelings towards the Institution are more substantial than those which words only can express.
>
> "Should all your expectations be realized, and there is every reason to believe they will, the Medical College cannot fail to produce the happiest results among my countrymen. No man, I assure you, is more sensible than I am, of the benefits which such an institution is calculated to dispense, but I know also that you have many very great difficulties before you, and the greater part of these you will have to contend with at the outset. My own experience enables me to tell you that no inducement to Native exertion is so strong as that of pecuniary reward, and I am convinced you will find difficulties disappear in proportion to the encouragement offered to the Students in this particular.
>
> "As an individual member of the Native community, I feel it belongs to us to aid, as far as lies in our power, the promotion of your good cause. At present this can hardly be expected on any very great scale, but as example may be of service to you, I for one will not be backward to accept your invitation to my countrymen to support the College.
>
> "I beg therefore, as an inducement to the Native Pupils now studying in the Institution, and to those who may hereafter enter, to offer the annual sum of 2000 Rupees for the ensuing three years, to be distributed in the form of Prizes. In order that these may be of substantial value to the Candidates, I propose that the Prizes should not exceed eight or ten in number, and that they should be available to Foundation Students only and Natives bona fide Pupils of the College. All other arrangements in regard to their distribution I leave to your discretion."

It was proposed, we learn from the Education Report for the year 1835, to distribute the two thousand rupees into Ten Prizes, six to the Anatomical, and four to the Chemical Classes, as follows :—

For Students of the Anatomical Class.

1st Prize.	Rs. 400
2nd „	„ 330

3rd „	„ 260	
4th „	„ 190	
5th „	„ 120	
6th „	„ 60	
		1350

For Students of the Chemical Class.

1st Prize.	Rs. 275	
2nd „	„ 200	
3rd „	„ 125	
4th „	„ 50	
		650
		2000

It does not appear that any prizes were offered for proficiency in anatomy in the year 1836. For though the students were examined as a matter of course in all the subjects lectured upon they had not as yet acquired any really practical acquaintance with anatomy to entitle them to the prizes aforementioned, and this for the simple reason that dissections had not commenced, as we have said in a former article, till the end of October 1836. But the results of examination in chemistry were so satisfactory, and so creditable to the students that, as we learn from the *Friend of India* (Oct. 20, 1836), the Principal submitted a report of them to the General Committee of Public Instruction in order that the public might participate in the satisfaction they afforded, and the students might be rewarded, by their attainments being generally known and appreciated.

The questions at the Final examination in chemistry for prizes were the following :—

1. Describe what is meant by the "specific gravity" of matter. Explain the mode of finding the specific gravity of a solid mass lighter than water, stating in detail the reasons for each step in the process.

2. Describe fully the chemical history of *Cyanogen*, and the mode of effecting its analysis. Describe the compounds it forms with *Hydrogen*, *Potassium*, and *Iron*, especially with reference to the subjects of prussic acid and its antidotes, and the manufacture of prussian blue, an exact account of the composition of all these substances is desired.

3. Explain the meaning of the term *isomeric*, and give illustrations of the subject with diagrams.

4. Describe the experimental proofs both analytic and synthetic of the composition of *water*, especially the evidence derived from the electric and the galvanic agents.

The students acquitted themselves so well that Dr. O'Shaughnessy in his prefatory notice to Principal Bramley's Report went so far as to say—"The answers I commit with confidence and pleasure to the criticism of the ablest chemists." That this was no exaggeration is evident from the opinions passed by independent judges. The replies of the first four prizemen were published in the Principal's report. They were repoduced with approbation in the *India Journal of Medical Science* (Nov.), the editor remarking that "such an examination is highly creditable to the pupils and especially to their teacher." Again the writer of the article in the *Friend of India* already alluded to, observes (and he is evidently a professional man) in reference to this subject:—" It would have been reasonable to expect a just exposition of the first and last of these subjects: but the second and third elicited replies, which (we speak with the utmost sobriety) have filled us with astonishment. * * They will greatly surprize every person who is capable of judging of their merits." We learn from the same source that the prizes so honorably won were bestowed by Lord Auckland on Thursday, the 13th October, in the midst of a large assembly. " They consisted originally of a Gold and Silver Medal given by Government, and money prizes given by Babu Dwarka Nath Thakoor to the amount of 750 Rupees; but as six of the competitors were considered equally entitled to the lowest prize of 75 Rupees, his Lordship very kindly added five prizes of the same amount, instead of allowing the single prize to be drawn for by all the six prizemen, as had been at first intended." The following is the list of the prizemen in the order of merit:—

		Rs.	Ans.
Shib Chunder Kurmocar	Prize of	262	8
Nobin Chunder Paul		262	8
C. J. Simons	Gold Medal		
Isser Chunder Ganguli		150	
W. Foy	Silver Medal		
Issen Chunder Dutt	75 Rs. each.		
Raj Krishna Deb			
Uma Churn Sett			
Sama Churn Dutt			
Ram Narain Doss			
Dwarka Nath Gooptu			

The following students obtained certificates of proficiency:—

Nobin Chunder Mitter	Certificates of great Proficiency.
Ram Coomar Dutt	
Kali Doss Mookerjea	
Gobindo Chunder Gooptu	
Mohes Chunder Nun	Certificates of Proficiency
Baney Madub Mazoomdar	
James Pote	

We have, it may be said, dwelt rather unusually long on this subject. We have done so advisedly. We have done so, in order to shew how at this infant stage of the Institution such remarkable progress was made by the students in such a difficult branch of science as chemistry. What, it may be asked, was the efficient cause of this? No doubt it was to a great extent due to the intelligence and zeal of the students, but it was, in our humble opinion, chiefly due to the zeal and earnestness of the Professor, and the mode of instruction adopted. If we have observed one thing more than another in our student life, it is the difference between earnest teaching and routine teaching. The difference is as much as between a living man and a corpse. In the one case you have the whole soul of your teacher flowing through his lips, in the other you have nothing but words or empty sounds. In the one case to learn is a matter of course with you, you cannot help it, because you become animated with the spirit of your tutor, in the other you equally cannot help being listless, or if you attend, what you listen to makes but little impression upon you. The routine teacher is not necessarily an ignoramus, he may be equally talented with his colleague, or even superior to him, but either he is lacking in the heart to convey instruction, or he has not the tact to find out the suitable mode of doing so. The man, who is deficient in enthusiasm, can never be a successful teacher, and he ought not to fret at his pupils never profiting by his prelections. The fault is his, not theirs. We have been led to this train of reflection by the singular success that attended Dr. O'Shaughnessy's teaching. His zeal and earnestness have never been equalled. And he knew how to convey the truths of an experimental science. He was not satisfied with making experiments himself, he made his pupils repeat those experiments, till they had "made with their own hands almost every experiment that had been demonstrated at the lecture table."

The Government of Lord Auckland, we said in our last, did not take any immediate action on the recommendations of the public to increase the tutorial staff of the College. How long this inaction of Government would have continued had it not been for the melancholy death of Mr. Bramley in January 1837, we cannot say; but immediately after the occurrence of that sad event, very important changes were made in the organization of the College, including a considerable increase in the professorial staff, as will be seen from the following letter addressed to the *Committee of Public Instruction* :—

HON'BLE SIRS AND GENTLEMEN,

The lamented decease of Mr. Assistant Surgeon Bramley, Principal of the Medical College established at Calcutta for the instruction of native youths in medicine and surgery, having brought the affairs of that Institution under the consideration of the Governor General in Council, I am directed to inform you that his Lordship in Council has resolved to apply the salary assigned to the late Principal in providing additional lecturers and establishments in branches of instruction not comprehended in the original scheme.

2nd. Continuing Drs. Goodeve and O'Shaughnessy on their present allowances with the same conditions attached for the present, viz, that they shall not seek private practice, the former officer will undertake the departments of medicine and anatomy, and the latter will continue to give instruction in chemistry and the materia medica. His Lordship in Council has appointed Dr. C. C. Egerton to be professor of surgery and clinical surgery, on a salary of 400 Rs. out of the funds of the college in addition to that assigned to him for superintending the Ophthalmic institution. Mr. Egerton will resign the medical charge of the Orphan School now held by him. Dr. T. Chapman recently appointed Assistant Surgeon in the General Hospital will give lectures on clinical medicine, drawing a salary of 200 Rs. per month from the college. Until he joins his appointment in the General Hospital, the duty will be performed and the salary drawn by Dr. McCosh his locum tenens. The Governor General in Council has further appointed Dr. Wallich lecturer on Botany in the Medical College, and he will receive from the funds of the college an allowance of 50 Rs. per mensem to cover the expense of a boat. Mr. R. O'Shaughnessy has been appointed demonstrator to the dissecting room (an officer understood to be much wanted in the college) and to give assistance to the chemical lecturer, on a salary of 150 Rs. per mensem; lastly Mr. D. Hare has been nominated Secretary of the Medical College with a salary of 400 Rs. to cover (with the aid of such establishment of clerks, &c. as was allowed to Dr. Bramley) all charges of accounts and correspondence, and the general business of the College.

The several professors above-named will form a council for the management of the general affairs of the college to which Mr. Hare will be Secretary. The senior in the Medical Service present will preside at the meetings of the College Council, but its decisions, with all other matters connected with the institution, will continue as heretofore to be under the direction of your Committee.

I have the honor to be, Honorable Sirs and Gentlemen,

Council Chamber, Your most Obedient Servant,
the 1st February, 1837. (Signed) H. T. PRINSEP.

No new subject, properly speaking, was introduced by the above arrangement into the curriculum of studies. But the addition to the professional staff certainly made way for the more efficient teaching of the subjects that used to be taught by the previously existing limited number of professors. Thus the appointment of Dr. Wallich to the chair of Botany introduced regular and systematic and therefore more efficient instruction in the subject, and by affording relief to Dr. O'Shaughnessy enabled him to devote more attention and time to, and therefore more efficiently to teach, the subjects of Chemistry and Materia Medica than he could do before. Again, the apointment of a lecturer on Clinical Medicine at the same that it made instruction in this branch more efficient, made instruction in Anatomy and Medicine equally so, by relieving Dr. Goodeve. It will be seen nevertheless that this arrangement was far from complete. Chemistry and Materia Medica were yet united in one chair, as were Anatomy and Medicine. These are distinct subjects and to be properly taught must be assigned to separate chairs. This differentiation of chairs was not effected, and other equally important chairs were not introduced, till some time after, to which we shall come when we resume the subject in our next.

MR. CUTCLIFFE'S INTRODUCTORY LECTURE AT THE CALCUTTA MEDICAL COLLEGE ON THE 16TH JUNE 1873.

We had the pleasure of listening to the Lecture as it was delivered, and the impression it made upon us then is the same it makes upon us now in its present form. It was one of the ablest and most practical lectures ever delivered in the Calcutta Medical College. The remarks and the observations that were made, though in one sense, were not what may in strictness be called original, were strung together in a most happy and original manner, which aided by the forcible, we had almost said, nervous delivery of the orator, rendered the whole lecture one of the most impressive and eloquent it has ever been our lot to hear. Without directly intending to give a summary of the various branches taught, the lecturer, in an exquisitely artful way, introduced each of them with its own interest and importance, and thus created in the minds of the fresh men, the students who have just entered the College, an indelible impression of the grandeur and the high position of the medical sciences and inferentially of the medical profession.

The medical sciences are sciences *par excellence* of observation and experiment. Rigid and repeated observation and experiment are the only means of getting a true insight into them, and the only means of advancing them for the benefit of suffering humanity. Books are of use only in so far as they are the result of previous observation and experiment, and in so far as they serve as guides to further observation and experiment. It is as hopeless and absurd to learn anything of medicine from books alone as it is to build castles in the air. Mr. Cutcliffe has urged this most strongly upon the careful consideration of the students who very often neglect to see and examine things for themselves, relying upon the false hope that they shall be able to acquit themselves well in examinations by committing to memory all that has been written about them in books. "Your professors," says the lecturer,—

> Your professors, as I have said, will guide you in your study of the several subjects which in your college course you will have to take up. I venture, however, to impress upon you the importance of endeavouring to acquire a practical knowledge rather than a mere theoretical knowledge of each of your subjects—to learn from the observation of objects or specimens, and not from mere study of books. Mere verbal descriptions in

Natural Science are valueless, if they are not worse. You do not want to evolve from your inner consciousness a conception of the form, figure, or character of a natural object which you have never seen. What you *do* want is a sensual demonstration of that object: you want to impress upon your mind, through the medium of your senses, a full knowledge of all of it that can be recognised by an intelligent use of your senses. To tabulate in your memories verbal descriptions of the character of plants which you have never seen, is not the way to learn Botany. It is merely to waste your time and energies in cramming in ideas of which you have no clear conception, and can possibly make no practical use. To speak glibly about the constituents of the several fluids and about the structure of the various solids of the body, whilst you would not know one from another if shown to you, is not the way to endeavour to possess a knowledge of General Anatomy. And the same kind of remarks would apply equally to Materia Medica and to Chemistry. If you want to know these subjects you must not be contented with book work. You must learn them by personal observation, and from actual demonstration of objects or specimens. The practical study of Chemistry and of Physiology in the Laboratory is now established in England as a necessary part of medical education. And the College of Surgeons has drawn especial attention to the importance of objective or demonstrative teaching by calling for reports from each recognised school, on the arrangements made and the method adopted for teaching Physiology practically. I hope that, in no long time, the practical class rooms which the Professor of Chemistry has I know long been pressing for, and which I have no doubt the Professor of Physiology will join with me in saying are urgently required for teaching Histology and Practical Physiology, may be supplied. Mean time you must take every advantage you can of the means which are now at our disposal for assisting you in objective study, and determine not to rest satisfied with the verbal description of others, but to see, and to know, and to judge for yourselves.

There can be no question of the soundness of the principle laid down in the paragraph just quoted. Indeed the matter of surprize with us is that such principles have to be enunciated at all in the present day. Whatever might have been the views of educationists before the time of Lord Bacon regarding the necessity of actual observation and experiment, which that philosopher happily called the wedding of the human mind to nature, for the purpose of enabling it (the mind) to fulfil its destiny, that of discovering and enjoying truth, the question is now finally settled, and it has now become a truism in all educational schemes. So much so, indeed, that a grand experiment has recently been set on foot in America, under the direction of Prof. Agassiz, the experiment, namely, of teaching natural science without any text-book, or rather, without any other text-book than the text-book of Nature.

The medical colleges throughout the world are yet the only institutions which offer any opportunity for the study and cultivation of some of the noblest sciences. Beyond their pale these branches of knowledge are either not taught, or taught so imperfectly, that no solid ground work can be laid upon which to raise the superstructure of their future advancement. Hence it is that young men with other aspirations than that of being successful practitioners of the healing art, often resort to these institutions in order to be initiated into the collateral branches of medicine, such as botany, zoology, chemistry, and not into medicine itself. We do not see any reason why such men should be dissuaded from their original motives. They should, in our humble opinion, have every encouragement from the professors, and the professor, upon whom devolves the duty of delivering the *introductory lecture*, should hold out that peculiar privilege of medical colleges as a strong inducement for young men to join them. We have always looked upon it as a mistake for every graduate of a medical college to attempt to turn out a doctor, or a doctor only and nothing more. Of course those, who want to be practitioners, should have as their "first and constant aim," as Mr. Cutcliffe urges,—" a knowledge of disease, and look upon everything else in their college life as subordinate to this the very essence of all that they want to know." To such, and these certainly must form the majority, otherwise the Medical College would cease to be a medical college, to such we cannot sufficiently recommend the following advice of the lecturer regarding clinical study : --

> I most strongly urge every student who has entered at this school to remember that, no matter what for the time being he may be engaged in, he is a *student of Medicine*, and to convince himself that if he wishes to understand Medicine and to learn to practise it successfully, he must go to the bed-side of the sick, and there seek the knowledge which he requires. My advice to you is to go to the bed-sides of the patients early and late, and to allow nothing to interfere with constant and devoted attention in the wards of the hospital. It will take you at least three months in the Medical, and as many in the Surgical, Wards to learn the rudimentary methods of bed-side observation. You must not suppose that you will at first be able to walk into the wards and understand all that is being done there. You will feel convinced of your ignorance at once, and if you get such a conviction well established, it will be much to your advantage. By coming early to the wards, you will soon begin to acquire habits of personal observation. You will learn *how* to observe, and a little later *what* to observe. Facts will come before you daily, and though at first not very clearly, they will, nevertheless make impressions on the memory and store the mind with what on subsequent reflection will become of great value. I assert that there is not a senior member of our profession now present who cannot recall the remembrance of cases which he saw in his first year of hospital pupilage, and I can positively declare that I have now a better

understanding of cases which I saw in my first year of studentship than I expected to have at the time when I observed those cases. I advise you to be contented with the little that you can at first perceive, and to leave the full development of the mental picture to time and further knowledge. Get in the outline faithfully, and fill in the details by study and reflection. Even when you cannot draw for yourselves a clear outline, you will find some one or more points or data which hereafter will serve you a good purpose, and most strongly advise you to begin at once to try and learn all that you can in the wards of the hospital.

The above is sound advice and every student ought to abide by it. We cannot, however, help observing here that Mr. Cutcliffe goes a little too far in the next paragraph, and betrays himself a most rigid disciplinarian when he urges students "so to employ their time as never to be idle,"—"to fill in their spare moments by bed-side observation,"—and would not allow them "to form groups and talk together between lecture hours," but would wish them "to take their note-books and go to the hospital and put down some observations." Students, and medical students in particular, must have rest and recreation in order to be able to resume their duties with redoubled ardour and energy, and nothing refreshes the mind and the heart so much as when we form groups and talk to each other between lecture hours. The student who is never idle, who has no spare moments, might turn out a favorite of a particular professor, but we have doubts as to his turning out, either a good man or a good practitioner.

Further on Mr. Cutcliffe is more express in the matter of discipline. "I must tell you," says he, "that you will, as students in the College, have to submit to discipline. You have passed from the school days of restriction to the liberty of manhood. But you must not suppose that the reins of self-government may be relaxed, nor the control of your superiors be withdrawn." Certainly not. We for our part are the strongest advocates of order and discipline in every sphere of life. We must however observe that there are various modes of exacting and enforcing discipline, all of which are not successful, at least not equally successful. Nothing, in our opinion, is a greater and a graver error in superiors, especially teachers, than to talk and grumble eternally about discipline. The teacher ought to be able to command respect and exact love by the worth and the manner of his teachings and by the force of his own moral character. He who cannot do this, but must screw his pupils into "a rigid system of obedience," will in vain look for that respect from them which proceeds from the heart and which is synoymous with love. We are sorry to notice that there has been of late much cry for discipline in the Medical College, and singularly enough there has been along with that cry much real laxity of discipline amongst the students. This state of things must be mended or it will gradually tend to worse and worse. The remedy, in our opinion, is in the hands, or as we should rather say, in the hearts of the professors. They have only to shew that they are really "actuated by the kindest and best of feelings" towards their pupils. If there is any thing which pre-eminently distinguishes the Hindu, it is gratitude to his preceptor. The preceptor has but to be kind and worthy, and we can vouch for the Hindu pupil that he will feel himself bound to him in "debt immense of endless gratitude."

The lecturer concludes by enjoining students to habitual truthfulness, to loyalty to Government and devotion to the service they would enter at the end of their college career, and to profound sympathy towards their patients. With reference to the last he very justly observes: "Do not make the fatal error of believing that to be able to do as Surgeons what may at first seem hard to perform, you must go through a blunting process. If you strive so to do, you may succeed in becoming brutalized; but you will never acquire that high tone of sympathy combined with subjection, which is absolutely necessary to enable you at all times so to feel for your patients as to be able to forget yourselves." It is a reproach of European doctors generally and of the Europeanized graduates of the Calcutta Medical College, that they are hard-hearted in the extreme. The noble sentiments quoted above ought to show that all are not so; that a doctor, who has cut and dissected the dead body and who has to cut and dissect the living body, is not necessarily a cruel and unsympathizing brute. We should warn students to beware that they do not by their conduct merit the reproach so often and not always unjustly levelled at them by their own countrymen. The passage, in which the lecturer enforces a habit of truthfulness, both in thought and speech, is so excellent that we give it *in extenso*:—

But study as you will, and grasp as fully as you may, the writings of others, you will never educate yourselves to become worthy of our profession if you do not, from the very commencement of your career, realise the nature of the moral and social bearing of the position which, as medical men, you aspire some day to occupy. The study of Medicine, if rightly pursued, has every tendency to develop those moral qualities which in professional men should be conspicuous. As students of medicine you must be considered to be men devoting yourselves to the investigation and culture of truth. Now the method which can alone be relied upon as a fundamental basis for the investigation and culture of medical truths, is, as I have insisted, personal observation. But the ability to observe thoroughly you will not find to be innate in you. You must train the faculty of observation by such mental efforts as will develop within you habits of strict accuracy, precision, and completeness. You must strive to free your minds from the influence of all prejudice whether such as may be inherent in you as a part of a natural infirmity, or such as you may have acquired either by a faulty use of language, or from delusion, which may have sprung either from certain systems which may have influenced you, or from wrong theories and erroneous demonstrations to which you may have been already exposed. "False conceptions," Bacon tells us, "so beset the minds of men, that it is not only difficult for truth to effect an entrance, but even when entrance has been granted and allowed, they will again meet us in the very instauration of the sciences and be troublesome unless men are forewarned and fortify themselves against them as far as it can be done." The love of truth must be fostered within you, and be defended from the seductive influences to which, from the infirmities of our nature, we are ever exposed. Such a love to be established firmly, must be intimately associated with habits of accuracy, precision, exactness, and completeness, both in thought and speech; and these habits have to be not merely acquired as a part of mental training, but they must be so impressed and maintained as to become instinctive, and to remain spontaneously operative. The language in which you strive to express your ideas must conform to the character of those ideias. It is not only necessary for you to learn to observe correctly, and to store up in your memories a precise image of what you may have perceived, but you must acquire the habit of expressing those perceptions in language so precise and accurate that it may convey to another mind an impression identical with that in your own mind. I know nothing more enervating to the mind, more destructive of all sound, healthy tone, than is either a loose, careless way of expressing the ideas which we have already formed, or a habit of selecting our language rather with reference to its presumed acceptability to hearers, than with a resolute determination to express perspicuously an exact representation of our own thoughts. The selection of the particular words in which thoughts are to be conveyed will vary with the taste of the individual. But I can conceive no greater offence to the good taste of a listener than for a speaker designedly so to misuse language, as to lead to a misunderstanding, or to a want of a correct understanding, of what the listener may be desirous of knowing.

The lecturer then reminds his audience of the celebrated saying of Johnson, namely, that, "it is more from *carelessness* about truth than from intentional lying, that there is so much falsehood in the world." The lecturer has avoided alluding to the sects and schisms which so unfortunately and so sadly divide the medical profession. If he had chosen to do so, he would no doubt have traced this sectarianism chiefly to want of truthfulness, to that pernicious habit whereby one sees all truth in one's own ideas and favorite doctrines, and none in the ideas and doctrines of others. Interest, undoubtedly, lies at the bottom of much lying, intentional and unintentional, but if the mind be schooled in an uncompromising love of truth, no amount of interest could cause it to swerve from the path of rectitude.

REVIEW.

A Medical Handbook for Mothers: or Hints for the Management of Health and the Treatment of the Disorders common during Pregnancy and Infancy. By Alfred C. Pope, M. D., &c. Henry Turner & Co. London. 1873.

HOWEVER much we medical men may look upon and even lament lay-doctoring, and especially that form of it, known as domestic medication, as an evil, we must admit that it is not an unmixed and absolute evil; nay, if we give due weight to all the circumstances with which a family and people in general are surrounded, we must also admit that it is a *necessary* evil. If regular medical aid had been every where and every time available, lay-doctoring would never have been heard of. For though, in a few instances, the origin of lay-doctoring could be traced to individual conceit and love of power, it must be admitted that it is stern nécessity which helps the play of that conceit and love of power. Indeed it is this necessity which human vanity takes advantage of to insinuate itself into the confidence of suffering humanity. If trained medical aid were ready at hand, people would never resort to any other, nor would any body without the necessary qualification dare offer his services. But the case becomes altered when regular medical aid is either not available at all, or not available in time. The exigencies of disease are such that delay in procuring relief is well-nigh intolerable, and absolute resignation is out of the question. When something must be done, or suffering is prolonged, or life is lost, any one, that presents himself with any pretension to save life or relieve suffering, is, as a matter of course, welcome. In the absence of such a pretender, the immediate relatives and friends of the patient will undertake to do something for him under the shelter of common sense. Under any circumstances, then, there must be, even in the most civilized countries abounding in trained medical practitioners, a large amount of lay-doctoring. This can never be abolished, unless we succeed in extinguishing the instinct of self-preservation, in which case medicine as a profession will also cease to be.

Instead, therefore, of fretting at lay-doctoring and domestic medication, the profession should endeavour as much as possible to mitigate the evil, or rather prevent its abuse. The best way to do it is by the compilation of guides which may be safely placed in the hands of laymen, guides which should certainly not be elaborate treatises on the practice of medicine, but contain the plainest hygienic rules for the preservation of health, and the plainest possible directions for the detection and treatment of the earliest departures therefrom. We would go the length of saying that it is the duty of the profession to place within the acces-

THE ACTION OF DRUGS.

By William Sharp, M.D., F.R.S.

(Concluded from p. 288.)

12. *Experiments on the healthy.*

The truest vindication of these experiments, and therefore the most becoming introduction to the subject, is contained in the first sentence of "The Great Instauration" of Lord Bacon :—

> "Francis of Verulam
> thought thus—
>
> "Of the state of learning.—That it is neither prosperous nor greatly advanced, and that *an entirely different way* from any known to our predecessors must be opened to the human understanding, and *different helps* be obtained, in order that the mind may exercise its jurisdiction over the nature of things."

If we substitute the word "medicine" for "learning," the sentence will still be true of this branch of knowledge. It is the unanimous confession of those best acquainted with medicine, that as a science it is "neither prosperous nor greatly advanced ;" though it has not hitherto been their conviction that "an entirely different way" must be opened, if it is to make any great advance. Without experience to the contrary, it would have seemed natural that such a conviction would necessarily follow the confession. But this has not happened.

It is the truth of this sentence of Lord Bacon which justified Hahnemann, and which justifies us, in his and in our endeavours after the discovery of an entirely different way from any known to our predecessors.

And the way proposed and entered upon by Hahnemann, and pursued by ourselves, is the way of learning the properties of medicines by experimenting with them, not only on the sick, but also on the healthy.

As two Essays (on the "Proving of Drugs," and on the "Physiological Action of Medicines") have already been occupied with this subject, I will content myself, on this occasion, with offering only a few remarks.

1. Let us not aim at impossibilities. In undertaking these experiments on the healthy, it is of great importance that we limit our endeavours within the bounds of what is possible to us. If we neglect this precaution, much time and effort will be thrown away, and we shall reap disappointment. For example, if we propose to ourselves to find out the *manner in which drugs act*, we shall soon get out of our depth, and our labour will be lost. I know that some do not agree with me in this persuasion. The discussion of it cannot be entered upon now, but I commend to those who differ from me on this point the following sentence of Sydenham :—

"However much, by seriously inclining our minds, we may discover what nature does, and by what organs she does it, the way in which she does it will always be unknown to man."*

2. Let us not stop short of what is possible to us. It is not surprising to find that the first efforts to make progress in a new path are defective. And many are now disposed to agree with me that the limitation of these experiments on health by Hahnemann and his followers, to the enumeration of symptoms, is not doing all that it is needful to do. For, if, on the one hand, it is a mistake to attempt what is beyond our power; it is, on the other hand, also a mistake to neglect to aim at doing all that is within our power. It has often been contended in these Essays, that when experiments with drugs in health are undertaken, besides the phenomena or appearances produced, called symptoms, being noted, the seat of these symptoms, or *the organs which they belong*, should be noted also. It is freely granted that the connection between a symptom and its origin may sometimes be very difficult to trace; but it will not be argued that it is impossible to trace it—that it is beyond our natural powers; and if it be granted that it is within our power, it must immediately be granted that it forms part of our duty.

3. We are pursuing "an entirely different way from any known to our predecessors." It has been earnestly contended that, with very few exceptions, the only action of drugs which is required of them, as remedies in disease, is that which they perform "silently and peacefully." This is the action which was formerly called "alterative," and now "specific." These terms imply two things:—that it is unaccompanied by signs perceptible by our senses; and that we know nothing of the manner in which it is performed.

The general adoption of this method of prescribing drugs would bring about a greater revolution in the practice of physic than has ever yet been dreamt of. And yet it is obviously in the right direction. "Nature is pleased with simplicity," said Sir Isaac Newton, and "More is in vain where less will serve." All real improvements in art are in the direction of greater simplicity.

When it is considered that this method leads to the ignoring of all established indications; to the renouncing of all former intentions; to the laying aside all that is usually called "active" treatment; it is not surprising that it is very repugnant to the majority of the profession, or that from them it meets with very determined opposition.

To see, in our future works on Materia Medica, no more catalogues of drugs arranged under the heads of "emetics" and "purgatives," "diaphoretics" and "diuretics," "sialagogues" and "deobstruents," is an anticipation too astounding to be contemplated with equanimity—too impossible to be realised. But this is the future which we humbly hope is before the profession.

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* *Sydenham's Works*, by Sydenham Society, Vol. II, p. 84.

And when the prejudices of education and the power of present habits have been overcome by the force of truth and the evidence of facts, what a beneficial change will have been brought about! Medicines, instead of being nauseous draughts, will have become pleasant charms; and physicians, instead of being shunned and dreaded, especially by children, will be welcomed and loved.

This silent and peaceable action of medicines, secret and hidden from our knowledge as to its manner, but very visible in its beneficial effects, is the "entirely different way from any known to our predecessors" which it is our happy privilege to advocate and defend. Instead of all the perturbative methods of the past, this is the curative method of the future.

4. The experiments with drugs in health are the "different helps" which Lord Bacon says must be obtained, in order that this entirely different way may be opened.

We want to learn of a drug, not whether it is a purgative or a diuretic, but what is its specific action—that action which is a disturbing action in health, and a silent and peaceful action as a remedy in disease. Experiments in health are *helps* in the acquirement of this knowledge. The specific action of a very few drugs has been discovered accidentally. The experiments in health which have already been instituted have helped to increase this number greatly; a continuance of them may reasonably be expected to add many more to the list, and to make our knowledge of them much more perfect.

5. The help which Hahnemann got from these experiments was obtained by observing the similarity of the *symptoms* produced by them to those of diseases; and he prescribed according to this similarity.

The help which I am now seeking to obtain is by observing the *seat* of the action of drugs, and its identity with that of diseases; so that a drug may be prescribed which has its action where the disease is principally situated.

There cannot be a question that this is more definite knowledge than that obtained by the mere observation of symptoms. And if more definite, then in the same proportion must it be more valuable.

6. When this identification of the seat of the action of the causes of disease, with the seat of the action of each drug, has to some extent been accomplished, a further *help* may be sought from experiments in health, by the discovery of the similarity and contrariety in the *kinds* of action of diseases and drugs.

After observing the symptoms, or signs of an action; and after discovering its seat, or the organs in which it is taking place; we may try to learn what sort of action it is. This is a further step in advance, and consequently the difficulties will increase.

In the study of nature our first task is the observation of facts. This belongs to our bodily senses, and the value of the performance of the task is determined by its accuracy. The difficulties which beset the duty, are the imperfections of our senses, and our hastiness in using them. Our next task is the interpretation of these facts, the learning their true meaning. This belongs to the mind. The difficulties which hinder its being rightly performed, are the weakness of our mental faculties, and the strong tendency which exists in us to invent hypotheses, that is, to guess at interpretations, rather than wait till the mind can observe them.

When, therefore, we endeavour to discover the kind of action which a disease or a drug is producing in an organ, we cannot exercise too much caution. The observations must be wary and prolonged to learn the facts; and it is absolutely necessary to confine ourselves to the use of words which simply express the facts observed, and which do not suggest any hypothetical explanation. For instance, if we see vessels become smaller or larger than they were before, instead of calling this a stimulant, an astringent, or a relaxant effect, let us be content to say of the vessels, as we say of the pupil, that they are contracted or dilated. The same caution is, if possible, still more imperatively required, when the mind attempts to interpret the meaning of the facts.

7. It may be noted in this place, that the fact which lies at the foundation of the difference between the disturbing action in health and the peaceful action in disease, is the difference in the dose. Organs in a state of health are, generally, not disturbed by a dose which is found by experience to be sufficient to act upon them curatively in disease.

Different doses of the same drug sometimes act upon different organs of the body in health; but doses, smaller than those given in health, can always be found, which act upon the corresponding organs in disease.

The subject of doses is a wide and interesting field for dispassionate and very careful enquiry and observation; but it is one of extreme difficulty and obscurity. The motto for it Lord Bacon has given us in these words:—

"In all our investigations of nature we must observe what quantity or dose of the body is requisite for a given effect; and must guard ourselves from estimating it at too much or too little."

8. Let us also note, once more, the direct object and the use of these experiments in health. They are these: -

First. To learn the action of each drug by itself, unmixed with other drugs.

Second. To learn the action of drugs, uncomplicated with the symptoms of disease.

Third. To discover the specific action of each drug; that is, to learn the organs upon which it acts, and the kind of action.

Fourth. To apply these discoveries to the treatment of disease; experience having taught us that the same organs which are disturbed in health by certain doses, are silently and peacefully cured in disease, by certain smaller doses.

9. Let us observe the indirect uses of these experiments. One branch of knowledge can generally throw some light upon another, and this indirect use is not wanting in experiments upon the healthy. If we take the

drugs which are known by experience to have a useful specific action in a particular disease, and make comparative experiments with them in health, we are sure to gain some information as to the seat or nature of the disease in question.

We have lately been studying gout. I may suggest, in illustration of the last remark, that if we were to take up this disease, and examine the drugs given for it as remedies it is obvious that, at starting, we must lay aside the remedies given on the evacuating plan; we must also lay aside such disputes as whether cold purgatives, like Epsom salts, or warm ones, like jalap, are to be employed; or, whether alkalies or acids are to be preferred; and, for the present at least, we must lay aside the tentative experiments of the chemists, such as the benzoic acid of Mr. Ure, the alkaline lithia of Dr. Garrod, and the phosphate of ammonia suggested by Liebig. Only the specifics remain; these may be taken, and a comparative examination be made, in order to discover what there is in common in their action in health. The reflex benefit would be a better knowledge of the nature of gout.

The drugs are such as bryonia, colchicum, rhus, and cinchona; pulsatilla, nux vomica, rhubarb, and sulphur. Let me propose as a subject of study, the question—How far do these drugs agree in their symptoms, and in the seat and nature of their specific action?

In the same manner the principal known remedies for other ailments may be studied, *e.g.*, ipecacuanha, sambucus, and arsenic, for asthma.

The curative action of even a single remedy in a disease, the pathology of which is obscure, may throw considerable light upon that obscure pathology, simply in consequence of the experiments made with the remedy in health. To my mind chamomilla has done this for some cases of diabetes.

10. Another indirect use of experiments with drugs upon the healthy. It awakens attention to the possible difference of cases whose symptoms are similar. It is a fact that cases of disease present themselves, the symptoms of which are so similar that they may readily be considered cases of the same disease; but the causes of which are so different that, to confound them in this way, would be to make a serious mistake. For example: Belladona may be so taken in health as to produce all the symptoms of scarlet fever. This has often happened. But this similar of of scarlet has never been communicated to others in the manner that real scarlet fever is. It is wanting, therefore, in the infectious or contagious element, which is the true cause of genuine scarlet fever.

11. It may be worth while to repeat that the information sought from these experiments is derived mainly from two sources. The more severe effects of drugs are learned from cases of poisoning, in whatever way brought about; the less severe from voluntary provings. On this account Christison on Poisons, and other similar publications, are very valuable, in a direction not contemplated by these writers on "Legal Medicine."

12. Some of the effects of drugs can be obtained by the topical application of them; and these become striking proofs of local action. For example: The pupil of one eye may be dilated to the uttermost by bella-

donna; and at the same time, in the same person, the pupil of the other eye may be contracted to the size of a small pin's head, by the *Calabar bean.* But generally the experiments are made by the drug being taken internally. In many instances the effects are the same, whether the drug is swallowed or introduced through a wound in any part of the body. On the other hand, of animal poisons, it is remarkable that even those which are most deadly when inserted by a wound, may often be swallowed without any injurious effect.

13. Many drugs act powerfully upon more organs than one; and the more there are of points of contact between the drug and the disease, the greater is the confidence with which it may be prescribed. For example: For a feverish headache belladona may be given as a remedy. If, in addition to the headache, there is an inflamed conjunctiva, the belladona may be given with increased expectation of good. If further, the throat is inflamed, the probability of success is still greater. If, to all these symptoms there is added a scarlet rash, the probability becomes almost a certainty; provided that the inflammatory condition of these several parts is not complicated with grave symptoms of some other kind, which may, in fact, be such as to change essentially the character of the case.

In like manner, a patient suffering from colic, or spasmodic pain in the bowels, may be relieved by nux vomica. If there are also cramps, or twitchings in the extremities, it will almost certainly succeed. So, in cases pointing to ipecacuanha, if, in addition to the other symptoms, there is nausea or sickness, it may be given with great confidence. Again, some affections of the heart are cured by spigelia; the cure will be more likely to be effected, if there is also in the case neuralgic pain about the eyes.

14. These remarks cannot be concluded without the expression of regret that many provings of drugs have been published, in which a great want of seriousness and distictness of object is apparent. Others are disfigured by a multitude of insignificant sensations and observations, calculated rather to bring disgrace upon the Physicians than benefit to the patient. The undertaking is one which should be promoted by every member of our body, but it should be warily done, with a clear purpose in the mind, with thoughtful gravity, with active suspicion of error, and with freedom from bias towards any foregone conclusion.

We are now able to answer the question with which this Essay commenced. How is the action of drugs to be discovered? Not in any of the ways hitherto commonly pursued; but in a new way. First, by experiments made upon ourselves and our friends while in a state of health. By these experiments we learn the power which drugs possess to *disturb* the health of the different organs of the body; and also how each drug may be characterised, and distinguished from all the rest. And secondly, by giving them to the sick under the guidance of the results thus obtained in health. In this way we learn their *healing* powers.

The only difference, in respect to the drug, between the experiments in health and the presciptions in sickness, is the quantity or dose to be taken.

In the experiments the dose must be large enough to produce symptoms of disturbance in some organs of the body. In the prescriptions the dose must be small enough to avoid causing such symptoms, but large enough to act curatively, though peacefully, upon the diseased parts.

May I without presumption conclude this Essay by addressing a few words of encouragement to those of my medical brethren who have toiled through a practical trial of homœopathy, amidst much discouragement and obloquy; and also to those who are beginning to find themselves mistaken in the condemnation of homœopathy in which they have hitherto joined?

Our medical authorities, and the great bulk of our colleagues, headed by the late Sir Benjamin Brodie, have not been ashamed to speak of homœopathists and to treat them as impostors or fools; forgetting that they are men educated like themselves, that they have investigated Hahnemann's system with a free spirit and in a practical manner, and have conscientiously adopted what in it they believe to be true. It is a great and unjust indignity, and, unless it is repudiated, it will one day recoil with heavy severity upon themselves.

Let us not desire the evil day. Let us rest assured that it is sufficient for ourselves to know that the self-denial, discomfort, and pain undergone, and the amount of time and thought expended on such experiments in health, as were begun by Hahnemann, and have been carried on since by many others, are a sufficient testimony of our honesty; and that the successful results with which these labors have been crowned, are a good proof of at least an average amount of intelligence and sense.

While many have thus spoken disparagingly of the labourers, they have not been afraid to appropriate the labours. But the attempts which have been made, during the last few years, to introduce homœopathic remedies as new discoveries, or accidental observations, are surprisingly puerile. The authors must have forgotten the declaration which we have on the highest authority, "There is nothing hidden which shall not be known."

Happily, the tide is now turning. Some of our eminent men, who, through unacquaintance with the facts, were carried away by the strong current of condemnation, have gained this information, and are beginning to acknowledge their mistake.

These, I doubt not, will be followed by others, and in the end, useful truth will prevail and patient conscientiousness will triumph.

This useful truth may not be Hahneman's homœopathy unaltered, but a system of Therapeutics springing out of it—a system matured by degrees, freed from all hypotheses, and founded upon a sure basis.—*The Monthly Homœopathic Review*, June 1873.

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CALCUTTA JOURNAL OF MEDICINE

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THE MATERIA MEDICA.

30.—CHINA (CINCHONA)

(Continued from p. 205).

Pathogenetic Symptoms.

Mind :—

. Anxiousness, fearfulness.
. (Dread of dogs and other animals, particularly at night.)
. Excessive anguish.
. Great anguish, death (brought on by Cinchona administered in the cold stage).
5. Intolerable anxiety (at eight o'clock in the evening and two o'clock after midnight); he jumps out of the bed and wants to kill himself, and nevertheless dreads to approach the window or the knife, with heat of the body, no thirst.
. He tosses about in the bed, is beside himself and in despair.
. Inconsolable.
. Distressing moaning and screaming.
. From time to time she has a weeping fit, without any external cause, brought on by some imaginary cause, an imaginary want, the idea that she cannot eat to satisfy her appetite, etc.
10. Cheerful mood, with sudden, short-lasting shrieks and tossing about, without any apparent cause.
. Despondency, sadness, hopelessness.

. Discouragement.
. Want of his usual cheerfulness.
. Disposition to be alone.
15. Lamenting ill-humor.
. Moaning ill-humor.
. Taciturn.
. Obstinate silence.
. Disobedience, want of docility.
20. His ill-humor is increased by caresses.
. He despises every thing.
. Dissatisfaction; he thinks himself unhappy and imagines he is tormented and teazed by every body.
. Things which appeared to him pleasant and interesting, now appear to him unworthy, shallow, and without any interest.
. He is vexed, and easily gets angry.
25. Anger increasing to the most violent wrath, he could have stabbed one.
. He gets vexed when excited, otherwise he is stupid, embarrassed, discountenanced.
. Inclines to feel angry, and seeks opportunities for it; afterwards quarrelsome, and disposed to grieve and reproach others.
. Ill humor with irresoluteness: she is unable to attain her ends, this makes her angry (in a few hours).
. Excessive and anxious cautiousness.
30. Excessive solicitude about trifles.
. Ill-humor, but neither sad nor quarrelsome, nevertheless not disposed to think fast.
. Mood gloomy, has no desire to live.
. Has no desire to work.
. Not disposed to think, alternate cheerfulness and gloom for three hours.
35. Want of disposition to intellectual and serious occupations.
. Indifference to external impressions, taciturn.
. Calmness of temper (curative effect).
. Silent ill-humor, not disposed to talk (on the first day).
. Not disposed to mental labor, drowsy.
40. Aversion to bodily and mental labor.
. He forms a number of comprehensive plans for the future.
. He forms many projects, and thinks upon executing them; a number of ideas crowd upon his mind at once.
. His thoughts come slowly, he is averse to motion, and is more inclined to sit and lie down.
. Slowness of thought.
45. He is absorbed in thought (as if his ideas were arrested.)
. He is unable to regulate his ideas, he makes mistakes in writing and talking; he places words which ought to follow, before others; he is very much disturbed by the talking of others.
. He builds castles in the air.
. Desire to work, read, write, reflect; extraordinary disposition to be industrious (curative effect).

Sensorium :—

. Vertigo, and nausea with vertigo, followed by a general feeling of heat.
50. Vertigo in the occiput when sitting.
. Vertigo, the head inclining to fall backwards, more violent during motion and when walking, less when lying down (in a few minutes).
. Continual vertigo, the head inclines to fall backwards, in any position, but especially when walking or moving the head (after 6 h.).
. (Vertigo on raising the head).
. The head feels affected as by vertigo from dancing, and when taking cold.
55. The head feels dull and desolate, as from sitting up over night.

Head :—

. Stupefaction of the head, with pressure in the forehead.
. Dull, stupefying headache early in the morning when waking from sleep.
. Cloudiness of the head.
. Obtusion of the head.
60. The head is affected as in a cold.
. The forehead feels dull.
. The head feels heavy as after an intoxication, with pressure in the temples.
. Gloominess spread over the whole head for half an hour.
. Dull feeling in the lower and posterior part of the head, as when waking from sleep.
65. Headache, at times in one, at times in another part of the brain.
. Headache in the temples, like dry coryza.
. Headache over the orbits, coming on in the forenoon, aggravated by walking, going off by eating dinner.
. Heaviness of the head; (at noon the head is affected with a painless reeling sensation.)
. Headache, a sort of heaviness and heat in the head, worst when turning the eyes, accompanied by darting pains in the temples.
70. Heaviness of the head.
. Heaviness of the head, which inclines to fall backwards.
. When waking from sleep, in the morning, heaviness of the head and weakness in all the limbs.
. In the morning the head feels dreary as after an intoxication, with dryness of the mouth.
. Aching in the forehead, (especially when opening the eyes).
75. Aching in the temples.
. Headache, weakness, followed by some coldness.
. Aching in the occiput.
. Pressure in the outer parts of the left temple.
. Compressive sensation in the temples.
80. Aching in the temple, in the evening.
. Aching in the right side of the forehead.

. Aching in the forehead; when bending the head backwards, both temples felt that aching in an increased degree; when sitting the aching was only felt in the forehead.

. Headache, first a sort of pressure in the forehead, afterwards spreading over the whole head.

. Violent aching deep in the brain, with feeling of constriction, especially in the right side of the forehead, and in the occiput, increased by walking.

85. Aching pain in the head, especially the occiput.

. Pressing headache, increased by the open air.

. Hard pressure in the occiput, as if the little brain were being pressed out.

. Painful pressure in the head, towards the forehead, as if the parts inside were too heavy and were pressing forwards, relieved by pressing upon the parts with the head.

. Pressing headache in that side to which he inclines.

90. A sort of oppression of the head, with sweat on the forehead.

. Pressure above the eyes, like a fulness in the head.

. Headache, as if the brain were pressed into a ball, with excessive mental excitement, inquietude, excessive and overstrained attention and fancy.

. Tearing, with pressure, in the temporal region, as if the bone were being pressed out. [Tearing or (drawing) with pressure and pressure with tearing (drawing) appear to be a characteristic pain of Cinchona.]

. Tearing aching in the left temple.

95. Tearing in several parts of the head, increased by walking and moving the head.

. Tearing headache from the right part of the occiput to the right frontal eminence.

. Drawing headache from the occiput to the forehead, as if the whole forehead were being contracted; this pain terminated in the temples as a throbbing; decreasing when walking, increasing when sitting and standing, and ceasing when pressing upon the parts with the hand.

. Drawing pain in the occiput, when sitting.

. Drawing pain behind the ears, in the head, extending to the mastoid process.

100. Drawing pain in the left side of the occiput, going off by bending the head backwards.

. Drawing pain in the forehead.

. When touching the forehead with the hand, he feels in that part a pain which moves to and fro.

. Violently drawing tearing in several parts of the head, increased when moving the head or walking about, decreasing when lying down.

. Darting tearing in the frontal eminences.

105. Darting tearing in the right temporal region, for three days.

. Dartings, from both parietal bones along the neck.

. Headache, a sort of darting towards the forehead, increasing until evening, when it disappeared.

. Digging-up pain in the left side of the forehead, when sitting down unoccupied, or when doing something which did not interest him.

. Headache, a sort of digging-up in the left side of the head, when sitting.

110. Headache, so intense as if the skull would burst; the brain seems to strike agaist the skull, like waves.

. Violent hammering in the head towards the temples.

. Headache in the left parietal bone, a beating pain.

. Uninterrupted, dull, cutting pain, extending from both temples and the occiput as far as into the orbit, more intense when moving the parts and when stooping.

. Stitching headache, especially in the left side of the forehead.

115. Burning violent stitches between the forehead and top of the head.

. Continual stitching sensation in the right temple.

. Stitching headache, in the forehead, when sitting.

. Stinging in the left temple.

. Stitching headache between the right temple and forehead, with violent pulsation of the temporal artery.

120. Single stitches, darting through the internal ear from above.

. Lancinations in several parts of the head, increased when moving the head.

. Headache from afternoon till evening, a sort of pressure in the middle of the forehead.

. Aching pain when walking, first above the forehead, afterwards in the temples.

. Pressure of the blood upon the brain.

125. Headache as if the brain were being pressed together from both sides and out of the forehead, increased by walking in the open air.

. Aching and pricking pain in the forehead and one temple.

. Stitches on the left side between forehead and temple; when touching the temple he felt a violent throbbing of the artery, and the pricking disappeared by this contact.

. Darting headache, in the temple, extending into the superior jaw.

. Headache, first of a spasmodic nature in the top of the head, afterwards on the side of the head, as if bruised, increased by the slightest motion.

130. Headache, when walking in the wind, a sore and bruised feeling.

. Headache as if the brain were sore, increased by touching the head or parts of the head ever so little, but especially by continued attention and deep reflection, even by talking.

Scalp:—

. The scalp is so sensitive to the touch that every part of it becomes painful, and especially the roots of the hairs.

. Painful drawing in the right side of the occiput.

. Drawing pain in the articulation of the condyles and the atlas, when touching the parts, obliging him to incline the head backwards.

135. Painful drawing in the outer part of the occiput at bone.
. Contractive pain in the left side of the occiput in the skin.
. Contractive external pain in the left side of the occiput, sensation as if the skin were being drawn together in one point; is not increased by touching the part.
. Pain as if the upper part of the scalp were grasped with the hand.
. Contractive pain with sensation as if the contraction took place in a circle, on the top of the head.
140. Sharp stitches in the left side of the hairy scalp.
. Several stitches in the nape of the neck (leaving a sort of stiffness behind).
. Stinging itching on the hairy scalp.
. Slight pressure in the outer part of the left frontal eminence, accompanied with vertigo and some nausea in the throat.
. Stitching pressure in the right frontal eminence, more violent when touching the parts (after 10 minutes).
145. Sweaty hair.
. Sweaty hair when walking in the open air.
. Creeping in the integuments of the forehead.

Face :—

. Frequent change of complexion.
. Pale countenance.
150. Wretched, livid complexion.
. Sunken, pale countenance.
. Hippocratic countenance (pointed nose, hollow eyes with blue margins,) indifference, insensibility; he does not care about hearing anything of things or persons that were otherwise very dear to him.
. Sunken, pointed countenance, pale, sickly, as after excesses.
. Bloated, red countenance.
155. Heat in the face.
. Burning heat in the face, when entering the warm room from the open air.
. Alternate heat and redness of the face.
. Momentary contractions of the integuments of the forehead, as if they became drawn together in one point in the centre of the forehead (after ½ h).
. Burning pain in the forehead and hot sweat on the forehead.
160. Pressure over the face, especially near the nose and cheeks, accompanied with drawing together of the eyelids, as if the upper and lower lids were drawn towards one another (after 3 h.).
. Stitching pressure on the forehead, above the nose and on the cheek (after 32 h).
. A sort of pecking pain in the zygoma and in one of the right molares.
. Fine stitches in the right malar bone, going off by pressing upon them.

. Boil upon the cheek.

Eyes :—

165. Soft pressure from below upwards, above the root of the nose and in the region of the eyebrows, going off when touching the parts, the skin of the left wing of the nose feeling tense.

. Pressure in both eye-brows, rather externally, aggravated by moving the muscles of the forehead (after 3 h.).

. Pain over the left orbit.

. Tearing about the left outer canthus.

. Fine-itching pain over the orbits.

170. Itching of the left eyelid.

. Titillating sensation of the eyelids (after 5h.).

. Violent pain of the eyelids.

. Feeling of dryness between the eyelids and eyeballs; when moving the eyelids the pain is like a rubbing, without any visible change about the eye.

. Itching pain in the outer canthi.

175. Painless pressure in the eyes, as is caused by weariness and privation of sleep (after 10½, 12 h.).

. When waking in the night, the right eye feels as if bathed in tears (after 19 h.).

. Sensation in the eyes as if they had sunk a good deal, which is not the case (after ¼ h.).

. Tremor, winking, twitching in both the eyes (after 3¾ h.).

. The left lower eyelid is jerked to and fro (after 6 h.).

180. Lachrymation with tingling pain of the inner surface of the eyelids.

. The eyes are somewhat red, with aching, burning pain in the eyes and much heat (in the afternoon, after 6 h.).

. (Scrofulous ophthalmia, especially when the cornea is affected.)

. Contracted pupils.

. The pupils are movable, but more disposed to contract than to dilate.

185. Dilatation of the pupils (after ¼ h.)

. Great dilatation of the pupils (after ¼ h.)

. Excessive dilatation and almost staring of the pupils with weakness of sight, hindering him from distinguishing anything at a distance, the complexion being fresh and the spirits good.

. Obscuration of sight.

. Dimsightedness.

190. Amaurosis.

. Black points hover before the sight.

. Smarting in one, afterwards in the other eye, with lachrymation.

. Smarting pain in the eyes, as from salt, with pressure; she is obliged to rub them constantly.

. Eye-gum in the outer corner (after sleeping).

Ears :—

195. Redness of the cheeks and lobules.

. Tearing in the lobules.
. Heat of the external ear.
. Vesicles behind the ears.
. Eruption in the concha.
200. Aching pain in the ear, like otalgia.
. A noise in the ear, like the tick of distant watch.
Throbbing sensation in the ear, followed by long tingling.
Tingling in the ears.
Frequent tingling in the right ear, accompanied with a ticking creeping in the same, as if an insect had got in.
205. Tingling in the ears, with headache in the temple.
Ticking in the ear.
Tearing in the cartilage of the ear and meatus auditorius externus.
. Pain in the left ear when touching it (after 6 h.).
. Humming in the ears.
210. The internal ear feels closed up, as if deaf.
. Hardness of hearing.

Nose: -

. Biting sensation deep in the nostril, becoming a painful stitch at every inspiration; when compressing the nose, the biting increases, and then an itching is felt in the dorsum of the nose, in the evening (after ½ h.).
. Fine prickings in the cartilage of the septum.
. Bleeding from the nose between 6 and 7 o'clock in the morning, after rising, several mornings in succession.
215. Frequent, profuse bleeding at the nose.
. Bleeding at the nose, after violent blowing.
. Redness and heat of the nose.
. Aching pain in the root of the nose (after the heat of the cheek had passed off) the pain moves to one side.
. Tearing pain in the dorsum of the nose.
220. He imagines he smells a corpse.

Mouth:—

. Shrivelled skin of the lips.
. The lower lip cracks (when sneezing) (chapped lips).
. The internal surface of the lower lip is sore and excoriated.
. On the right side of the upper lip, near the corner of the mouth, a sore feeling, as if felt after wiping the nose a good deal when affected with a cold.
225. Pain in the lower lip, near the left corner of the mouth, as if a corroding ulcer had formed there.
. Eruption on the lips and tongue, little ulcers which itch and burn.
. Dry lips without thirst (after 7 h.).
. Blackish lips.
. Contractive sensation in the salivary glands; ptyalism.
230. A quantity of saliva in the mouth with nausea.
. Conflux of saliva, accompanied with nausea.
. After an agreeable surprise a quantity of bright blood appeared in the mouth.

. Dryness in the mouth.

. Dryness in the mouth with thirst.

235. Biting sensation on the tip of the tongue, as if caused by pepper, followed by conflux of saliva at that spot.

. Burning stitches in the surface of the tongue.

. Tongue very much coated, especially in the afternoon.

. Tongue coated white, early in the morning.

. Tongue coated with a thick, dirty-yellow crust.

240. Tongue coated yellow.

. Pure tongue with bitter taste.

. Painful swelling of the posterior border of the tongue.

. Smarting pain on the middle of the tongue as if the place were sore or burnt.

. Vesicle under the tongue, painful when moving the tongue.

245. Fine stitches in the tip of the tongue.

. Sensation on the tongue as if it were dry and covered with mucus.

. (Yellowish tongue, not furred.)

. Shooting pains in the parotid gland.

. Simple pain in the submaxillary glands, especially when touching or moving the neck.

250. A sort of clawing or squeezing pressure in one of the submaxillary glands, especially when moving the neck, or when touching the parts.

Jaws and Teeth: —

. Cutting burning pain in the upper jaw, when standing (after 7 h.).

. Darting dull stitches in the right lower jaw.

. Tearing in the left lower jaw.

. Swelling of the gums and lips.

255. When biting the teeth together, he feels an aching pain in the crowns of the right molares.

. Toothache, resembling a pressing drawing in the left jaw.

. Jerking tearing in the upper and posterior molares of the left side (after 5 h.).

. Digging-up in the upper molares, momentarily relieved by biting the teeth together and by pressing on them (after 40 h.).

. When smoking, to which he is used, he feels a tearing pain in the upper jaw, moving upwards and backwards, and followed by a fainting fit.

260. Aching and drawing pain in the left upper row of molares, with sensation as if the gums or the interior of the cheeks were swollen (after 1 h.).

. Drawing aching pain in one of the upper molares, in the morning, with sensation as if they were numb (after 24 h.).

. Drawing pain in the anterior incisores in the morning. [Rhus tox. appears to be an antidote to the two last symptoms.]

. Small, fine stitches, with tearing, in the upper moalres of the right side, neither increased nor diminished either by contact or by inspiring the open air (after 2½h.).

. Pecking pain in one of the upper molares.
265. Drawing toothache comes on easily in the open air and in a draft.
. Toothache, dry coryza and lachrymation.
. Toothache, stitches through the anterior teeth from behind forwards.
. Throbbing toothache.
. Toothache with vacillation (looseness) of the teeth.
270. Looseness of the teeth, only painful during mastication.
. Tearing, with pressure, in the right upper and lower jaws, before midnight.
. The lower incisores are painful as if they had been knocked against something.
. (The toothache comes on principally after dinner and at night.)
. (The toothache is extremely aggravated by contact.)
275. (Black coating on the teeth.)

Pharynx and Œsophagus :—

. Sore throat.
. Contractive sensation in the throat.
. Difficult deglutition, as if the œsophagus were too narrow.
. Tension in the pharynx, when bending the head backwards; this however does not impede deglutition (after 8 days).
280. Scraping sensation in the palate, also between the acts of deglutition.
. The smoke of tobacco seems to him uncommonly sharp and biting in the posterior part of the palate (after 24 h.).
. Troublesome feeling of roughness in the throat.
. Sensation of emptiness in the pharynx and œsophagus.
. Sensation in the pit of the throat, as if swalllowing would produce a feeling of soreness (although he does not feel any pain when swallowing).
285. Swelling of the submaxillary glands, with painful deglutition, the glands are especially painful when swallowing.
. Stinging in the right side of the throat, only when swallowing.
. The inside of the throat feels swollen; stinging, during deglutition, on the left side of the tongue; an aching pain is felt here when talking or taking an inspiration.
. Stitches in the throat, between the acts of deglutition, from a slight draft of air.
. (Stinging in the throat, in the evening after going to bed, not during deglutition, but during an inspiration.)
290. Painless swelling of the velum pendulum palati and the uvula.

Taste and Appetite :—

. The mouth is slimy and the taste watery and insipid.
. Slimy taste in the mouth, giving him an aversion to butter.
. Insipid taste in the mouth, after drinking.
. Saltish taste in the mouth.
295. All the food has an uncommonly salt taste, afterwards a bitter taste.
. Sweetish-saltish taste in the mouth.
. The wheat bread and butter taste bitter and salt, with dryness

in the palate, and thirst; between the meals he has no strange taste in the mouth, only dryness and thirst.

. Sensation in the mouth similar to what one experiences after the smelling of strong vinegar.

. (Choking and contraction in the fauces without impeding respiration.)

300. Sourish taste in the mouth, frequently, as if he had spoiled his stomach by fruit.

. Brown bread tastes sour.

. Acidity in the mouth.

. First a sweetish, afterwards a sourish taste in the mouth, copious saliva.

. Sweetish taste in the mouth.

305. Tobacco tastes sweetish when smoking.

. Bad taste in the mouth, as after cheese.

. Tobacco has no taste when smoking.

. Supper has little taste.

. Food, especially wheat-flour, tastes bitter.

310. No bitter taste in the mouth, but food tastes bitter, not after it had been swallowed.

. The taste in the mouth is always bitter.

. Bitter taste in mouth, early in the morning.

. Bitter mouth.

. Bitter taste in mouth; even the tobacco tastes bitter when smoking.

315. Bitter taste in the throat, on account of which he has to swallow the saliva all the time (immediately).

. Bad, sometimes bitter, taste in the mouth; the food had no pleasant, nor had it a bitter, taste.

. Bitter taste in the mouth when drinking coffee.

. Coffee tastes sour.

. Aversion to coffee, although food has a good taste.

320. Beer tastes bitter and affects his head.

. Aversion to beer.

. Aversion to water, desire for beer.

. Great desire for wine.

. Smoking, to which he is used, affects his nerves.

325. He feels as if he had eaten, drunk and smoked enough, nevertheless food and tobacco taste naturally (in a few h.).

. No desire for food, his taste being good.

. He relishes supper, but he is immediately satiated, and can eat but little.

. Indifference to food; he gets a little appetite while he is eating, and relishes the food somewhat.

. He does not relish his dinner.

330. Canine hunger with flat taste in the mouth.

. He has a desire for food; but he knows not which.

. He has a desire for many kinds of food; but he does not know which.

. A longing for things unknown.

. Hunger, but no appetite.
335. Want of appetite as if owing to remote nausea.
. Little appetite at noon from a feeling of repletion.
. Hunger, nevertheless no appetite, the food which he put in his mouth, although having a natural taste, was disagreeable to him.
. Hunger at an unusual period in the afternoon.
. In the morning, violent hunger and appetiie, without knowing for what.
340. No desire for either food or drink.
. Excessive aversion and loathing to certain aliments which are not disagreeable, even when he hears them merely spoken of, accompanied by dread of labor, continued drowsiness by day and yellowness of the eyeballs.
. Great desire for sour cherries.
. Slight thirst.
. No thirst when eating.
345. Sensation as if a putrid vapor came out of the mouth.
. Bad, putrid smell out of the mouth towards morning, going off as soon as she eats something.
. Mucus in the mouth, early in the morning after waking, and after a somewhat fatiguing exercise; he imagines that the mucus has a bad smell

Gastric Symptoms:—

. A badly tasting mucus frequently rises into his throat.
. Sensation as if some of the food reached as high up as the throat (after 3 h.)
350. Bitter eructations after a meal.
. Eructations tasting of the ingesta.
. Risings of mere air.
. Tasteless eructations after a meal.
. Eructations as if caused by nausea, with colic (after $\frac{3}{4}$ h.).
355. Eructation, as if from inclination to vomit.
. Scraping sensation in the fauces, especially about the border of the larynx, as is felt after rancid eructations or heart-burn.
. A sort of half sobbing, half eructation.
. No appetite, nauseated, he wants to vomit, but cannot (fore and afternoon).
. A sort of canine hunger with nausea and inclination to vomit.
360. Inclination to vomit and vomiting.
. During a meal stitches in the side and back, and constant inclination to vomit.
. Nausea in the region of the throat, after a meal.
. Nausea with a good appetite.
. Nausea without vomiting.
365. Vomiting. Continual vomiting.
. Drawing, darting pain during a meal in the side of the abdomen.
. Fullness after a meal, good appetite before.
. Repletion after a meal for a long time.

. Stool after a meal.

370. Drowsiness after a meal.

. Great desire to sleep after a meal.

. Weakness after a meal, he would like to lie down.

. After a meal, nausea, flushes of heat and orgasm of the blood disappear.

. Half an hour after dinner, a pressing headache, lasting until he goes to bed.

375. When sitting down after a walk, succeeding a moderate meal, he feels an anguish, with nausea, at the stomach, as if the stomach had been over-loaded and spoiled in consequence, nevertheless he is hungry.

. Weariness and laziness after a meal.

. Faintness and drowsiness after supper.

. After a meal, a hard aching pain in both sides of the abdomen, below the umbilicus.

. Colic, after eating a moderate supper with good appetite; distended abdomen, sharp, aching pains, with occasional pinching, in all the bowels.

380. After a moderate dinner and supper he feels a pinching pressure somewhat above the umbilicus in the epigastrium; motion makes this pressure intolerable, it is appeased again by complete rest.

. Colic, before and shortly after dinner, as if from incarceration of flatulence.

. Colic after drinking, as when one takes a cathartic.

. Fermentation in the abdomen from eating fruit (cherries).

. The nourishment which had been taken for supper, remains in the stomach undigested.

385. Weakness of digestion.

. The stomach is easily spoiled by milk.

. The stomach is easily spoiled by eating a little too much, were it ever so innocent, there appears an insipid taste in the mouth, a sense of fulness in the abdomen, ill-humor, and headache.

Stomach :—

. Sense of emptiness and flatness in the stomach.

. Feeling of coldness in the stomach.

390. Feeling of coldness in the epigastrium after every cold drink he swallows, recurring at every inspiration.

. Stitch in the precordial region after every drink he swallows.

. Shuddering or chilliness with gooseflesh after every drink he swallows.

. After the pressure at the stomach, a burning sensation is felt from the stomach to half way up the chest.

. Hard pressure at the stomach after a meal.

395. Pressure at the stomach, griping in the stomach.

. After eating a meal with good appetite, he is attacked with pressure at the stomach, afterwards accumulation of flatulence and lastly vomiting.

. Pressure at the stomach.
. In the morning, when lying on one side, pressure at the stomach, (as if it had become constricted,) going of when lying on the back.
. Pressure in the stomach as if from repletion.
400. Violent pressure in the stomach, going off during a meal.
. Head, long-lasting pressure in the stomach after eating, whatsoever it be.
. Heaviness and pressure in the stomach.
. Oppression of the stomach.
. Feeling of repletion in the stomach.
405. Colic in the region of the stomach, resembling a pressure, abating when rising from the seat, returning when sitting down again, and continuing two hours. (after ¾ h.)
. Sore feeling with pressure (or pain as when one presses upon a wound) in the precordial region (several mornings).
. Violent pressure under the precordial region, as if all the parts there were sore, the same in any position, or when touching the part; shortly after, violent diarrhœa, which did not relieve the pain in the precordial region. (after 7 h.)
. Oppression in the precordial region arresting the breathing.
. Clawing sensation in the precordial region, arresting the breathing.
410. Anxiety with precordial region, especially after a meal.
. Colic, pinching (stitching,) aching under the precordial region, as if diarrhœa would come on, without any evacuation taking place, in the evening.
. Darting stitches in the stomach (after 3 h.).
. Sharp stitches in the pit of the stomach.
. Stitching pain in the pit of the stomach, extending to the sternum.

(To be Continued.)

EDITOR'S NOTES.

A CASE OF ANEURISM OF THE ARCH OF THE AORTA SUCCESSFULLY TREATED WITH IODIDE OF POTASSIUM.

Dr. Robert Keith reports the above case in the *Edinburgh Medical Journal* for June. The patient, a Private, was under treatment from the 20th April 1872 to the 21st Feb. 1873, when he was discharged, "with the tumor still in existence, though not half the size it was on the 29th May, the pulsations not nearly so strong, and the skin in a healthy condition. The man himself felt no discomfort, and considered that he was quite well. The following was the treatment adopted in this case: Perfect rest in the recumbent position; very spare diet up till the 21st September, during the greater part of which he was allowed only one pint of tea, twelve ounces of bread, two eggs, and one ounce of butter, in the twenty-four hours. The medical treatment consisted of large doses of Iodide of Potasium, ʒss. three times a day, from the 22nd April, and for the first few days small doses of tincture of Aconite at bed time. He continued to take the iodide up to the 18th September, when it was stopped for a few days, and resumed from the 30th September till the 24th October, and from the 7th till the 19th Dec. and then entirely discontinued." In this way nearly 3 lbs of iodide was consumed by the patient without his suffering from any of its physiological effects. Dr. Keith is doubtful as to whether the partial recovery of this case was due to the iodide or to rest and the hygienic treatment adopted. From our own experience we can assure him the improvement was due chiefly to the iodide, and partly to the tincture of aconite. We may here remark that, to the best of our recollection, it was Dr. Chuckerbutty who was the first to suggest iodide of potassium in the treatment of aneurism. A paper of his on the subject was published in the *British Medical Journal* (1862).

CHEMISTRY OF NIM (NIMVA)—THE AZADIRACHTA INDICA.

The first attempt at analysis of the bark of this time-honored tree was by the late Mr. Piddington, who in June 1826 sent to the Calcutta Medical and Physical Society (*Transactions*, Vol. iii, p. 430) a quantity of what he believed to be "the Crystallised Sulphate of the bitter and febrifuge principle of the Neem), to which he gave the name of Sulphate of Azedirine, the unknown base being called Azedirine. Unfortunately (probably under the expectation of gaining the medal the Society had offered for the discovery of a substitute for Quinine) he did not mention the process by which he had obtained it but merely remarked in his letter "that the expense of preparing it will be comparatively trifling." Next comes Dr. Cornish who, in a paper on Indian Febrifuges (*Indian Annals*, Vol. iv), gives the chemical composition of the bark, describing the process by which he obtained what he believed the alkaloid principle, which he hence called *Margosine.* He does not seem to have determined the ultimate elements of which this principle is composed, and he has not given its formula. Besides this principle, Dr. Cornish obtained from the bark an essential oil, a bitter resin, gum, starch, and saccharine matter in considerable quantities.

The last analyst is Mr. Broughton, Government Quinologist, who published his analysis in the *Madras Monthly Journal of Medical Science* (now defunct). Mr. Broughton differs from Dr. Cornish in some essential points. Mr. B. has succeeded with great difficulty in determining the composition of the bitter principle which according to him is $C_{36} H_{50} O_{11}$. This is a resinous substance and, being devoid of nitrogen, he cannot, in any respect, look upon it as an alkaloid. According to Mr. Broughton : "The leaves contain a small amount of bitter substance of a similar nature, but which is far more soluble in water. The same substance is also contained in the bark in addition to the one described. It has very similar properties to the resin, of which it is a hydrate. No peculiar *alkaloid* is contained in the leaves. The *oil* contains a small amount of bitter substance of the leaves, not the resin of the bark. The powerful smell of the tree is well known, but it is not due to the presence of a sulphuretted oil, as has been surmised ; indeed, I have not succeeded in obtaining an *essential* oil from the tree. If the bark is distilled with water, the distillate has the perfume of the tree, but no *oil* is perceptible, though it has the power of decolorizing potassic permangate."

THE CALCUTTA MEDICAL COLLEGE.

IV.

It must have been evident from our last article on the Medical College that following Mr. Kerr and Dr. H. H. Goodeve we made a mistake in our first article about the date of the first opening of the College. That date, according to Dr. Goodeve, was the 20th Fedruary 1835. We have shown in our last article that the College could not have been opened before May 1835, as the preliminary examination for the *selection* of students on the foundation was held on the 1st of that month. We have, in fact, all testimony, direct and indirect, contemporaneous and subsequent, with the single and singular exception of that of Dr. Goodeve, proving that the College was opened on the 1st June 1835. We have dwelt upon this apparently trifling point only to show the untrust-worthiness, as descriptions of facts, of many of the statements made by Dr. H. H. Goodeve in his Introductory Lecture in 1848; and also to show the careless way in which Mr. Kerr has written the history of the Calcutta Medical College in his *Review of Public Instruction in Bengal.* We are sorry Dr. McLeod has so implicitly followed his authorities without endeavouring to probe their soundness with the care and industry for which he is generally so remarkable.

We now proceed with our narrative of the rise and development of the College. Of an origin, the humblest imaginable, the College has now attained to the proud position and grand dimensions of one of the first Medical Schools in the world. Our readers will no doubt be surprised to learn that when at last, according to the recommendations of the Committee on Native Medical Education, the Government resolved upon abolishing the Native Medical Institution, and the Medical Classes of the Sanskrit and of the Madrissa Colleges, and founding, in their stead, "a new college for the instruction of a certain number of native youths in the various branches of medical science," "in strict accordance with the mode adopted in Europe," all that it could think of doing, and all that it did, was to appoint only two men for this arduous undertaking—one to be the Superintendent of the Institution, "who shall devote the whole of his time to the interests of the institution and who shall not be permitted to enter into private practice or to hold any situation that can in any way withdraw his attention from his duties at the institution, and who was to be "aided in his duties by a European assistant," who also was to "devote the whole of time to his duties at the institution."

The government of Lord William Bentinck, though it saw the inadequacy of the Native Medical Institution and the Medical Classes in the Sanskrit and Madrissa Colleges to impart a sound medical education, could not, without doubt, realize the nature and extent of the machinery that was necessary to fulfil that object. It saw the necessity of the English language being made the medium of instruction in a Science which, having its foundation in anatomy and physiology, could be said to exist at the time only in Europe, and could therefore be communicated adequately only through one of the European languages. But it evidently had no idea of the complication and vastness of the science itself, no idea of the various collateral sciences which converge towards it and which must be taught before medicine and surgery can be at all taught. If it had that idea, no financial consideration, we believe, would have led it to launch the Medical College with only two men in the tutorial staff. But it was well that such was the case. It is probable that the expenses of a full-fledged college would have appalled the authorities and postponed indefinitely its establishment. The public, however saw the inadequacy of the professorial staff and protests were at once entered, as the following quotation from the *India Journal of Medical Science* (July 1836) will show :—

> We have however yet to learn what system of medical education is to be adopted at this college. Is it intended to cultivate the science of medicine and surgery in all their branches, under the exclusive guidance of Messrs. Bramley and Goodeve? If so, we do not hesitate to say that the means are disproportionate to the ends proposed to be attained by such an excellent institution. That Messrs. Bramley and Goodeve are men of education and high professional talents no one can for a moment question: but is it to be supposed that these two gentlemen can teach the several branches of medical education in this country, which in Europe occupy the constant toil of at least five professors? If the medical education in this country is to be a superficial one, we are convinced the pupil of such a school will do more harm than good ; for if in literature "a little learning be a dangerous thing," how much more so in medicine ! Besides professors of

> annatomy, there should be those of materia medica, botany, pharmacy, chemistry, midwifery, surgery, as well as a clinical lecturer, and one on the practice of medicine. We well remember that Carpue a professor of anatomy in London, with two hundred pupils, considered the duty of teaching anatomy only so arduous that he had no spare time for any other occupation. Brookes also devoted the whole of his time to this one branch of medical education. Professors of chemistry, who instruct in general and pharmaceutic chemistry at a chemical laboratory, in like manner find that they have quite enough to do, and no time to spare of lectures on the other branches of medical science. Mr. Bramley in his inaugural lecture has very properly made some pertinent and judicious observations on the effects of empiricism, which he endeavoured strongly to impress on the minds of his auditors. To guard against such an evil we would recommend him to suggest to the higher authorities the necessity of more teachers.

These protests were not without some effect, for immediately after the assumption of the reins of Government by Sir C: Metcalfe, Dr. W. B. O'shaughnessy was appointed (Aug. 1835) a professor of the College. But how could even three men, however eminent in the profession, teach the whole circle of the medical sciences? Leaving aside its specialities, Medicine includes at least eight distinct studies, such as, Anatomy, Physiology, Chemistry, Botany, Materia Medica and Pharmacy, Practice of Physic, Surgery, and Midwifery, and each of these subjects could only be done justice to by the undivided attention of one professor. The difficulty was met at the early stage of the Institution by coupling two or more of these subjects into one, as for instance, anatomy with physiology, chemistry with botany and materia medica and pharmacy, &c. But even with this expedient, it was too much for three men to impart instruction in all these subjects. The *India Journal of Medical Science* again (April 1836) raised its protest, and in some respects of a new character. With reference to the course of study adopted in the College it thus remarks :—

> The above course is well planned ; and in Anatomy, Physiology, General Chemistry, Natural Philosophy, &c. we have no reason to doubt, the students will be well taught ; but in the other departments, namely, the important branches of Surgery and Practice of Physic in India, we cannot admit that any one of the incumbent professors are sufficiently qualified to instruct.
>
> The oldest of the three professors, we mean the Principal Mr. Bramley, arrived in India in August, 1829, and has had no experience in the diseases

of India as they prevail in various situations and in different constitutions. Dr. Goodeve did not arrive until April, 1831, and therefore has had less. But Dr. O'Shaughnessy, the other professor, has had least of all, having arrived so late as August, 1833. Now we are willing to admit that each and all of these gentlemen may be thoroughly acquainted with the principles of Cullen; they may be well versed in the arguments and subtleties of Brown and Darwin; endued with the doctrines of revulsions, of Broussais, familar with French pathology; fresh from the theatre of Anatomy and the laboratory of Chemistry; and may have witnessed the whole of the clinique of Europe; but when they come to India their knowledge is bounded. Here they are to receive and not to afford instruction!

In tropical surgery and diseases they are wanting in practice and experience; these are the defects, and against which alone our commentary in directed.

In the practice of a Medical man there is a certain series of events attracting his attention and constantly giving rise to new ideas. It is true these may be conveyed from one individual to another, and from one age to another; but then they come in different shapes and with different impressions, notwithstanding they are collected and formed into systems, and we will allow even then that they may serve as partial guides in Europe, where diseases are so generally understood. But this is not the case in India, where there is such variety of climate, and as great a variety of people as to habits, manners, and customs. We must also take into acccount that the history and management of tropical disease have not been conveyed through the medium of the press, from age to age. Hence only those who have seen disease in India in all its various shapes and characters on the Indian constitution, are able to point it out, and to discover remedies for its removal. It is therefore necessary to have professors in the College who are possessed of these acquirements: here are the desiderata, and we maintain without fear of contradiction, that they must be supplied to render the present system of instruction complete. We should therefore be glad to find added to the present number of professors not only a tried skilful experienced Surgeon, but also another experienced practitioner who can lecture upon disease as it appears on the European and native constitution in various parts of India—who has seen it in the field, in cantonment, in the North, in the South, and Eastern and Western provinces of India. We do not mean that these gentlemen should interfere with the principal or the incumbent professors to supercede them. The additional professors should be practitioners, for it would be absurd to suppose any person capable of instructing on that from which he himself is to be debarred. It is only by the daily intercourse with disease, that the knowledge of its various modifications is to be attained and taught; it must be at the bed-side of the patient as well as in the lecture room. Abernethy, Sir Astley Cooper, Elliotson, Cline, and others were all not only professors but the leading practitioners of the day.

The complaint here raised was not simply against the paucity of professors, but against the competency of those already appointed to teach the practical part of the main branches of the science. And the Editor very justly distinguishes between theory and practice, and between practice in one country and practice in another, and therefore very justly lays stress upon the appointment of men who were not only acquainted with the principles of their art, and even with the practice of that art as adopted in Europe but who were also familiar with disease and accidents as they are met with in India, and who were capable, from actual experience, of suggesting modifications in their treatment necessitated by difference of climate and difference of constitutions, habits, &c. The arguments, however cogent they might have been, were irritating to the professors themselves; and who knows this was not the reason which actuated those professors to wage a perpetual and unseemly warfare against Mr. Corbyn in other fields, and which ultimately culminated in the establishment of a rival Journal by them? But what did Mr. Corbyn do, and indeed what could he do, as a journalist, than point out what he conscienciously believed to be defects in the new institution which were real and serious, defects which were calculated to interfere with the very objects for which the institution was called into existence?

No action was, however, taken by Government (then just passed into the hands of Lord Auckland) on the above recommendations, and the Medical College, with its three professors, went on in its career of training, after the model of Europe, pupils who were expected to be qualified to practise medicine and surgery on rational principles. Anatomy and physiology were taken up by both Messrs. Bramley and Goodeve; surgery, so far as then could be taught, was taken up by Mr. Bramley, and the practice of physic by Dr. Goodeve. Upon Dr. O'Shaughnessy devolved the teaching of natural philosophy, chemistry, botany, materia medica and pharmacy. But notwithstanding these serious defeciencies and drawbacks the pupils really made rapid and remarkable progress in the various branches of science to which they were being initiated. This was no doubt, in part, due to the fact of the number of pupils not having been large enough to be embarrassing to the professors, but chiefly to the earnestness and zeal displayed by both professor and pupil, and the good will, not to speak of perfect friendship, that so happily obtained between them in that infant stage of the institution. Alas! it seems as if those days are gone by never to return, days when the teachers could command respect of the taught by affection and love and not by the enforcement of discipline and threats of punishment.

(To be Continued.)

AN APPEAL.

The Editor begs to bring to the notice of the friends of catholicism in medicine in general and of Homœopathy in particular, that the *Calcutta Journal of Medicine* has hitherto (now five years and a half) been conducted at much personal sacrifice of time and purse, and that the burden, in reality the burden of the public, which he has been hitherto bearing upon his own shoulders, could be greatly lightened, if only all gentlemen who profit by the blessings of homœopathy would subscribe to the *journal*, and if all who are already subscribers would be good enough to pay off their subscriptions regularly, and besides, if those gentlemen, to whom the *Journal* is being supplied *gratis*, would show a little liberality by extending their hand of patronage. The amount of subscription is such a trifle that this appeal, it is hoped, will meet with a ready response.

ACKNOWLEDGMENT.

A Medical Hand Book for Mothers: or Hints for the Management of Health and the Treatment of the Disorders common during Pregnancy and Infancy. By Alfred C. Pope, M. D., &c.

We shall review this excellent little book in our next.

DR. FRANCIS'S CATALOGUE OF PROFESSIONAL PUBLICATIONS IN THE VERNACULAR.*

At first sight it might appear that all the notice, a publication of the sort before us demands, is a simple acknowledgment of its receipt with the customary thanks for the courtesy shewn in the presentation. Yet a moment's reflection is enough to convince the Journalist that his task is not exactly so light. The publication, though essentially as its unpretending title indicates, a list or a catalogue, and as such, seemingly of no more service than as a help to intending purchasers to chose from among the various articles exhibited, is not devoid of interest on several accounts. It marks in an unmistakable manner the rapid progress that professional book-making in the Vernaculars of the Presidency has been making at the present time. We use the term *rapid* advisedly. It is hardly a quarter of a century since the Bengali Class of the Calcutta Medical College has been established and yet within this short space so many volumes as those contained in the list and some more, especially those belonging to the new School of Medicine not mentioned therein, furnish plain proofs of the great activity of the native Press in this respect. There is another fact connected with Bengali Literature which, when borne in mind, will render it still more obvious with what speed professional publications have proceeded. Prose composition in Bengali does not date earlier than after the foundation of the College of Fort William in 1800. It was for the use of the students of that Institution that the first Bengali prose books were translated and compiled, such as a version of the Sanskrit Hitopodesh and the composition of the lives of Rajahs Kissen Chandra of Nadiya and Pratápáditya of Jessore. Hence it is obvious that within half a century of the start of Bengali Prose Literature, the earliest professional work—the first in the List before us—*A Manual of Anatomy in Bengali* by the late Pandit Madhusudana Gupta—made its appearance. If only the same measure of excellence be attained in the scientific manuals hereafter to be written that has already been achieved by such gifted authors as Pandit Iswara Chandra Vidyáságara in his adaptation of Marshman's History of Bengal originally designed for students of the College of Fort William and prepared under the patronage of the late learned Major G. T. Marshal, the then head of that institution, it will not be too much to expect that the advanced system of professional education of

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* *A List of Professional Publications, including Anatomy, Physiology, Medicine, Surgery, Midwifery, Botany, Chemistry, and Zoology in the Vernacular Languages of the Bengal Presidency.* By C. R Francis, M. B., Deputy Inspector-General of Hospitals, Bengal Medical Service. Wyman & Co. 1873.

Europe will take deep and lasting root in the native mind. The excellent suggestions contained in the Preface to this little brochure are so well calculated to secure the most desirable reforms in our Native Medical Education that we make no apology in quoting them in extenso;—

> With reference to the kind of manuals that are required' for India, (a Committee is now sitting in Calcutta to consider this subject), I would make a suggestion. Whatever translations or whatever original treatises are required should be put into the hands of selected educated natives. The number and the character of the works in the list now published show the aptitude and the willingness of these gentlemen for the task. But, whereas they have, as seen in some of the publications, laboured, as it were, without a rudder,—being inexperienced in the art of composition, and not knowing exactly how to give the gist of a subject,—when working under the auspices and direction of the Committee, the precise nature of the work required being defined for them, we should get results equal to those produced by the most accomplished writers of Europe.
>
> As I have frequently urged elsewhere, translations alone are not wanted. There are, indeed, some subjects which are not materially affected by climate. Anatomy for example, and Chemistry; but the ills affecting the human body are not the same in India as in England. Some that have their home in one country are scarcely known in the other. It has been said that the peculiar diseases of India may be dealt with *originally* in separate chapters, to be added to the literal translation of all or portions of a standard English work. But, surely, it would be more satisfactory and less expensive to at once write an original treatise for India—on Medicine, Midwifery, Surgery, and Medical Jurisprudence—dealing cursorily only with those diseases that are especially peculiar to a cold climate, as European professors touch lightly on what are chiefly confined to the tropical world. Translate, if you will, the standard works of Europe on Anatomy, Physiology, Chemistry, Botany, and Zoology; though, in these, references must be made to modifications caused by climate. But let us have an original manual on each of the four first named subjects.
>
> It is not to be expected that either translations or original treatises will be written for nothing. The present Lieutenant-Governor of the North-Western Provinces, Sir William Muir, has shown his discretion in offering, for works of general literature, sums of money sufficiently remunerative to competitors. The result has shown the correctness of his mode of procedure. Several candidates have appeared in the field; and more than one useful publication has thus been added to the Vernacular Literature of the North-West.
>
> I cannot but think that a similar scheme would be equally successful in Calcutta, giving birth to a series of useful manuals for our Native Medical Subordinates, who, at present, have no medical literature to consult beyond the notes of their own lectures and the works enumerated in this list.

We would, in conclusion, offer Dr. Francis our heartiest thanks for the excellent spirit in which the above observations and suggestions have been made, and for the kindly feeling, so rare nowadays, which he has thus manifested towards the natives of this country.

CLINICAL RECORD.

1. *A Case of Diarrhœa. Recovery.*

UNDER CARE OF DR. M. L. SIRCAR.

Jogendronath Mookerjee, aged 15, who has been suffering from malarious fever and enlarged spleen for nearly a year, complained of heaviness of the stomach on Wednesday evening the 2nd July, in consequence of having taken his meal unusually late. During the night he had three copious diarrhœaic stools of a whitish grey color and mixed with undigested food. In the morning he still complained of frequent rumbling in the bowels, and there was much flatulent distention of the abdomen. *China* 30 was prescribed at 10 A. M. He took four doses of this medicine, a dose after each stool up to 1 P. M. But in spite of that, the diarrhœa continued without the slightest change for the better, the stools becoming more and more copious each time. The last 3 stools were very copious, not less than a seer each time. *China* was stopped and in its place *Ac. Phos.* 6. was given, as it precisely covered the symptom, "gurgling in the abdomen, when bending forwards, also when touching the abdomen." There was no return of Diarrhœa even after the first dose.

Remarks.

The above case shews most clearly how a medicine, seemingly homœopathic to a disease fails to make the slightest impression upon it, when a truly homœopathic medicine arrests its progress and cures it like a charm.

2. *A Case of Ulcerative Folliculitis of the Pharynx. Recovery.*

UNDER CARE OF DR. M. L. SIRCAR.

Babu R. K. Banerjea, Prof.—,got fever at night on the 25th June last. He was quite cool next morning, took his usual meal, went to college, but felt uneasy in the afternoon. The day following (27th) was passed in this wise. On the 28th he got distinct fever in the evening. On the morning of the 29th took a dose of seidlitz powders and after the bowels were worked, he took 8 grs. of quinine in two doses. The result was cinchonism and, in spite of that, return of fever at 1 P. M. On the 30th took two doses of the following—

Quinæ Sulphat.	gr. ii	
Acid. Nitro-mur. dil.	♏x	
Tinct. Cinchonæ	ʒss	
Decoct. Cinchonæ	℥i.	Ft. haust.

Cinchonism, and fever at 1 P. M. as on the previous day. In addition, he felt pain during deglutition.

On the 1st July no medicine was taken, but the fever not abating he took on the following day, diaphoretic mixture during the height of the fever and Cinchona mixture during remission.

The pain of the throat gradually increased.

3rd July. Tired of allopathic drugging the patient himself took *Bell.* 6 and *Merc. s.* 6 alternately.

4th and *5th.* *Bell.* 6 alone. No improvement resulting I prescribed *Hep. s.* 6. The fever and the pain in the throat became less, but not to any considerable extent.

8th. On making an examination of the pharynx, found the follicles, especially those of the left side swollen, congested, and some in a state of ulceration. I therefore prescribed *Kali bichr.* 6. which was continued till the 10th with considerable advantage, the fever being nearly gone, and the pain during deglutition being also much less. The ulcers were still visible, and I applied to the pharynx a solution of Argenti Nitratis (gr. x to ℥i), after which the ulcers healed up rapidly and patient made a complete recovery in a few days. He took the *Kali bichr.* till the 13th.

Remarks.

In this case, the internal medicines, *Hep. s.* and *Kali bichr.*, were no doubt effectual in subduing the fever and the inflamation in the pharynx, but the topical application of the solution of nitrate of silver was equally, without doubt, effectual in causing rapid healing of the ulcers in the pharynx.

3. *A Case of Jaundice. Recovery.*

Under care of Dr. M. L. Sircar.

Babu S. Mukerjea, a young man aged about 20, who placed himself under my treatment on the 16th June last, gave me the following history of his case :—" A week after I had kept up two consecutive nights in the latter end of April, my whole body began to itch. In the course of the week my eyes changed their usual color and turned yellow, and two or three days afterwards my urine became yellow also, whereas my stools became white. I was placed under the treatment of Drs.—,under whose care I remained for three weeks or a month without the least improvement. I was then placed under Kavirajs, and although I remained under their treatment for a fortnight or three weeks, I did not derive the slightest benefit, notwithstanding their promise to cure me in a week. I then left off regular treatment for a week or ten days, and without taking any medicine internally, went on applying externally medicines from quacks. The result was the same, that is, no improvement."

When on the 16th June I took him under my care, there were the following symptoms:—deep yellow color of the conjunctiva, and though the skin was dark-colored, the jaundice was well seen in it too. Slight enlargement of the liver. Some feverishness in the afternoon. Gave *Nux v.* 6.

19th June. Has been taking *Nux v.* but without any tangible improvement. The medicine was continued in the belief that its trial has not been sufficient.

21st. Not the slightest improvement being reported, discontinued *Nux v.* and gave instead *Bryo.* 6. The improvement was rapid from this date and by the end of the first week of the present month, he was nearly well, and at the end of the second week there was not a vestige of the disease.

Remarks.

There were very few symptoms in the above case to enable one to select the appropriate remedy. We were entirely guided by clinical experience, which, in absence of numerous symptoms, is not to be neglected.

Gleanings from Contemporary Literature.

THE ACTION OF DRUGS.

By William Sharp, M.D., F.R.S.

(Continued from p. 194.)

10. *Experiments on animals.*

In the paper on "The Physiological Action of Medicines," which I read before the British Association for the advancement of Science, at its meeting at Nottingham in 1866, a protest was made against experiments for medical purposes on living animals. The objections to the practice are of two kinds: one set of objections arises out of considerations of its cruelty; the other comes from the evidences of its inutility. In my opinion any advantages which have hitherto been derived from such experiments are not sufficient to remove these objections.

Since this protest was made before the British Association, the subject has been considered by the General Committee of that scientific body, and the result of their deliberations is thus stated in the "Report" for 1871:—

> "A committee, consisting of ten individuals, having been appointed at the last meeting of the British Association, held at Liverpool in 1870, to consider the subject of Physiological Experimentation, in accordance with a resolution of the General Committee hereto annexed, the following Report was drawn up and signed by seven members of the Committee:—
>
> "Report.
>
> "I. No experiment which can be performed under the influence of an anæsthetic ought to be done without it.
>
> "II. No painful experiment is justifiable for the mere purpose of illustrating a law or fact already demonstrated; in other words, experimentation without the employment of anæsthetics is not a fitting exhibition for teaching purposes.
>
> "III. Whenever, for the investigation of new truth, it is necessary to make a painful experiment, every effort should be made to ensure success, in order that the suffering inflicted may not be wasted. For this reason no painful experiment ought to be performed by an unskilled person with insufficient instruments and assistance, or in places not suitable to the purpose—that is to say, anywhere except in physiological and pathological laboratories, under proper regulations.
>
> IV. In the scientific preparation for veterinary practice, operations ought not to be performed upon living animals for the mere purpose of obtaining greater operative dexterity.
>
> "Signed by
>
> "M. A. Lawson, Oxford; G. M. Humphrey, Cambridge; John H. Balfour and Arthur Gamgee, Edinburgh; William Flower, Royal College of Surgeons, London; J. Burdon Sanderson, London; George Rolleston, *Secretary*, Oxford."

The resolution of the General Committee annexed to this Report contains the following clause:—

> "That the said Committee be further requested to consider from time to time whether any steps can be taken by them, or by the association, which will tend to reduce to its minimum the suffering entailed by legitimate physiological enquiries; or any which will have the effect of employing the influence of this association in the discouragement of experiments which are not clearly legitimate on live animals."

A new committee was appointed to carry out this suggestion.*

At present, perhaps, it may be said that the subject is open to two opinions. Those who doubt the propriety of such experiments will not be willing to make them; but they may lawfully learn—indeed they cannot but learn—what may be taught by the results of the experiments made by others, whose convictions allow of their being made.

A remarkable series of experiments was undertaken by an Edinburgh Committee of the British Medical Association, presided over and reported upon by Professor Hughes Bennett, in 1868, which deserves careful notice. The subject of enquiry was the action of mercury on the liver. The experiments were performed by Drs. Rutherford and Gamgee. They occupied two years. Thirty-three dogs were operated upon. Satisfactory observations could be arrived at in only eight of these. The conclusions drawn by the Committee from these experiments are given as follows :—

> "1st. The relation of food to the biliary secretions is not so invariable as previous experimenters appear to think. . . .
>
> "2nd. The relation supposed to exist between the amount of biliary secretion and the size or weight of the animal has not been supported by the foregoing observations. . . .
>
> "3rd. Although an animal will live for a certain time without any bile passing into its alimentary canal, it would appear that, even when a fistula has been established without accident, the health begins to suffer, in periods varying from a few days to a few months . . . [contrary to the opinion of some former experimenters.]
>
> "4th. Various circumstances apparently diminish the amount of bile secreted. The chief of these, as shown by the preceding observations, are starvation, diarrhœa, and mercurial poisoning. . . .
>
> "5th. As to anything that enables us to increase the amount of bile, beyond the giving food and supporting health, we are unacquainted with it. Perhaps there is no opinion in medicine more widely spread, and certainly there is none more universally acted upon, than that mercury does so; in short, that it acts as a cholagogue. Yet not only have the few experimenters who have directed their attention to this subject, invariably observed that mercury rather diminishes than increases the secretion of bile, but the general results of the trials made by your Committee fully confirm this conclusion. We have seen that in whatever form or dose it may be given, such as continuous moderate doses of blue pill, minute and frequently-repeated doses of calomel, or large doses varying from 10 to 15 grains, it utterly fails to stimulate the liver. Its constitutional action has been excited slowly and rapidly by means of corrosive sublimate with a like result. In poisonous doses it produces a marked diminution in the flow of bile. In all these varied attempts, carefully repeated, under every varying circumstance that could be thought of, no evidence was obtained that mercury acted specially upon the liver at all. The exact measurement of all the bile secreted in eight dogs, first without and then with mercury, tends rather to show that, so far from increasing the flow of bile, it causes its diminution, through its general depressing action on the entire organism. This fact seems now to be so certain and thoroughly established, that the Committee consider it unnecessary to make any further researches on the subject."†

In the corresponding Report presented to the British Association for the Advancement of Science, at its meeting at Norwich, 1868, the methods of performing the experiments are related; all details are given; and additional experiments with *podophilline* and *taraxacum* are described. The conclusions drawn from these experiments are that podophilline diminished the biliary secretion, and that taraxacum did not influence the biliary secretion in any way whatever. The Report, in conclusion, observes that—

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* *Report of the British Association for the Advancement of Science.* 1871.

† *Medicine in Modern Times*, p. 229. 1869.

> "On this and many other topics connected with therapeutics, what we require are not unfounded assumptions and vague speculations, but positive knowledge based on unquestionable data; these we have furnished, and consider them amply sufficient to demonstrate the fallacy of the opinions everywhere prevalent as to the cholagogue action of mercury."*

These extracts are long, but I trust their importance will justify me in giving them; and they will make the conclusions I have presumed to draw from the experiments of the Edinburgh Committee, and from their inferences, intelligible in few words:—

1. Mercury *does act locally* upon the liver, the result of the action is a diminution, and not an increase in the secretion of bile.
2. *This* action is the one which takes place in *healthy* livers.
3. Prof. Bennett is not entitled to infer from this action in health what may be the action in *unhealthy* livers. There is nothing in the experiment to show that this may not be the *opposite* of its action in health.
4. Experiments in disease are necessary, as well as experiments in health, to learn the action of drugs.
5. There is evidence, from experiments on the sick, that mercury increases, that is, restores, when it is deficient, the secretion of bile, in some cases of disease. This may, and probably does, arise from the restoration of a more healthy state of the organ.
6. The conclusion drawn from these experiments by the committee, or the principal fact ascertained by them in reference to the action of mercury, is directly in accordance with the teaching of homœopathy and organopathy concerning the action of drugs.

Other experiments upon animals are being carried on at present. One series is conducted by Drs. A. Crum Brown and T. R. Fraser, the object of which is to prove the connection between chemical constitution and physiological action. Numerous experiments have been made upon rabbits and frogs. Another series is conducted by Dr. B. W. Richardson, partly with the view of introducing new anæsthetics, but mainly with "the idea of studying the action of substances which are to become remedies, not by the old faulty method of so-called experience, but by proving physiological action and the relation of chemical constitution to physiological action." With the same object, therefore, as that of Drs. Brown and Fraser.

Dr. Richardson is very bold in his expectations. He says:—

> "I am certain the time must soon come when the books we call 'pharmacopœias, will be everywhere reconstructed on this basis of thought, and when the chemist and physician will become one and one."

He even expresses the earnest hope that this "huge reform" will be commenced by Act of Parliament.

Enough has been said in the chapter on chemistry to damp such expectations as these, but all can sympathise with Dr. Richardson in the concluding words of his Report:—

> "We cannot pretend, in reports like these, to vie with our more fortunate brethren in other departments of science. The physiologist has no ground of pleasant work in common with the astronomer, the geographer, geologist, ethno-

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* *Report of the British Association for the advancement of Science.* Norwich. 1868.

logist, or chemist. His researches are hard (unrelenting, I had almost said), excessively minute, laborious, and at all times, however absorbing, painful; many of them can, in fact, only be carried on under a sense of duty amounting to necessity, and with the sincerest, the most solemn feeling that they are being conducted for the ultimate benefit of all the higher classes of animal existence. In the preparation of this report I have held on throughout by this sense of duty, and earnest faith that good mast come out of the labour."*

11. *Experiments on the sick.*

These bring us to a debating club of contention. In every age, but especially in ages of freedom and activity of thought, partly from good motives and partly from bad ones, a hot warfare of disputation has been carried on, and it has been continued without other change than that which fashion has made in the means in use. It is commonly asserted of opponents that they kill their patients, whether the doses given are poisonous on the one hand, or infinitesimal on the other.

They entangle us in a labyrinth of confusion. There is just light enough to make its darkness and chaos visible. The very various means which have been pressed into the service; the very different quantities of those means which have been made use of; and the multiplicity and diversity of the effects which have been produced by them—and this during a period of more than two thousand years—are more than enough to bewilder and discourage the most sagacious and painstaking student. Many times the same medicines are given in the most dissimilar diseases, and with opposite intentions; and yet hypotheses are never wanting to explain and vindicate these contradictory prescriptions.

They usher us into a chamber of horrors. On entering it we see first the "helleborism" of the Greeks; on looking round, one set of violent measures presents itself after another, till we end with the intoxicating stimulants of the present day. It has one great redeeming character—the chamber is paved with good intentions. But the traditionary reference of this character to another place ought to teach us the stern lesson that good meanings and wishes do not justify bad works; and that, therefore, it behoves us all to see to it that we be found, not only influenced by good intentions, but also wisely practising right things. We are to remember that the anxiety of the patient for a cure, and the desire of the doctor for success, though they have encouraged, do not justify the frightfully painful, and not unfrequently fatal experiments which, in every age, have been performed upon the sick.

What are experiments on the sick? Every dose of medicine which is given to a patient is an experiment. This is self-evident. A grave responsibility, therefore, rests on the physician who prescribes them, and he ought to be able, on every occasion, to give a sufficient reason for their administration.

Let us enquire what occupies the mind of the physician when he prescribes a dose of medicine.

His mind has been running in one of three grooves. The first has been cut out for him by hypotheses; and so deeply has this been cut, that a mind once fairly in it cannot, without the greatest difficulty, be got out of it. These hypotheses extend to the nature of the case, to the indications supposed to be furnished by the symptoms, and to the properties supposed to be possessed by the medicines. These hypotheses are speculations congenital to man's nature (Lord Bacon's idols of the tribe), or they are pleasant reveries of the individual man (idols of the den), or they originate

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**Report of the British Association.* Exeter. 1870.

in intercourse with other men (idols of the market), or they are the teachings of popular professors (idols of the theatre). How these hypotheses have prevailed for a season, how each in its turn has been supplanted by another, how erroneous and mischievous they have all been, has, to some extent, been considered already in this essay.

The second groove is that of empirical experience. This leads the practitioner simply to give again that which has been given before in cases presumed to be similar. When we reflect how wanting in plain evidence of success the giving of medicines has hitherto been, and consider what a multitude of diseases occur for which we have no known remedies at all, it becomes painfully conspicuous that the empirical method is defective and unsatisfactory beyond description.

The third is the groove of enterprise. This tempts the earnest-minded physician to try some new thing. It is not wonderful that the dissatisfaction arising from the actual condition of medicine should urge men forward in search of something better. And so new drugs are tried, or old ones are tried afresh, after a random manner, without rule or principle, in the hope that, by chance, some better remedies may turn up. In this way, while I was a student at Guy's and St. Thomas's Hospitals (then adjoining each other), Dr. Elliotson, at the latter, gave large doses of carbonate of iron (rust) for some time to every patient he had in the hospital, in the hope that it would cure some of them.

After all, very little has been learned, during two thousand years, from all these experiments upon the sick :—

Because pure observation has been clouded and distorted by the hypotheses of the speculating physician, or has been made vague and objectless by the want of a principle to guide the empirical practitioner.

Because, almost always, several drugs, have been mixed together in the same prescription, and given at the same time ; so preventing the effects at each being distinguished. And

Because the symptoms or effects of the drug given to a sick man are necessarily obscured by being complicated or mixed up with the symptoms or effects of the disease.

To have a distinct notion of what experiments on the sick have been, it is necessary to go into some details ; and yet the subject is so vast that it is not easy to select any details which shall be sufficiently brief, and at the same time so illustrative of the whole as to give a distinct notion.

Perhaps this can be best done by selecting a single disease, and by going briefly, but with care, through the history of its treatment. For this purpose, I think, *gout* may be chosen as a representative disease. This also is an extensive subject ; so that its history must be limited to the last two centuries, and to English writers.

Let us begin with *Sydenham*,* who tells us, in 1683, in the introduction to his Treatise on the Gout, that he had himself been a great sufferer from it for thirty-four years.

As to the nature of gout Sydenham is very explicit. He says :—

> "Its only forerunner is indigestion and crudity of the stomach, of which the patient labours some weeks before."
>
> "The more closely I have thought upon gout, the more I have referred it to indigestion." This indigestion he calls the *antecedent cause.*

The result of the indigestion is a foreign product in the humours. This he calls the *causa continens.* It is now called th *materies morbi.*

On the treatment he says :—

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* *Tractatus de Podagra et Hydrope*, par *Thos. Sydenham*, M. D. 1683.

> "In gout but three methods have been proposed for the ejection of the *causa continens*—bleeding, purging, sweating. Now, none of these succeed."
>
> "Bleeding is clearly contrary to that indication which is required by the *antecedent cause*, which is indigestion."
>
> "Sure I am that all purging above or below, mild or sharp, is mostly injurious."
>
> "Evacuation by sweats, although less mischievous than the other two forms, is still prejudicial."
>
> "I confidently affirm that the greater part of those who are supposed to have died of gout, have died of the medicine rather than the disease."
>
> "If evacuants are out of place in gout, what are the indications of treatment? Two points are most particularly to be considered. The first is the *causa antecedens*, or the indigestion of the humours. The other is the *causa continens*, or the heat and exæstuation of the same, when they have become putrid and acrid. These two are as far as the poles asunder. What helps one hurts the other. Hence the difficulty of treatment. If we strive by heating medicines to subdue the indigestion, we run the risk of inflaming the humours; whilst moderate diet and cooling medicines, which allay the heat and acridity, cause indigestion, and impair the natural warmth."

But as medicines must be given, the following are recommended as *digestives*:—roots of angelica, elecampane, leaves of wormwood, lesser century, germander, groundpine, &c., &c. And the *antiscorbutics* horse-radish, scurvy-grass, water-cress, with the remark that these last are too acrid and pungent.

Then a prescription is given containing *thirty simples*, with this very interesting comment:—

> "Different species of these herbs, in the form of a skilful mixture, do better than any particular ones alone. However much the rule of *the simpler the better* may apply to *specifics*, as often as we purpose to cure the patient by satisfying any particular *intentions*, a variety is best."

It need scarcely be pointed out how remarkably this vindicates by anticipation the single medicine of homœopathy; each medicine which is given according to this method, having the character of a specific.

Sydenham says no external remedies are known; and then adds: "We must look beyond medicine." For, "in gout the cause is a change and new nature of the system;" and to be cured the patient "must change his whole habit of body." This is to be attempted mainly by diet and exercise. "Moderation in meat and drink, so that the stomach receive no more food than it can digest." "The other extreme, as I have found in my own person, is equally injurious." "The palate of the patient must be consulted."

Salt and spices are injurious; he is not to take supper, bed being "for the digestion of the humours, not for the concoction of the food." But a free draught of small beer may be taken, for this is an excellent preventive of renal calculi. "It cools and washes out the kidneys."

A milk diet, he says, has prevailed for the last twenty years. It does good while continued, but when left off the gout returns worse than ever.

London small-beer, hopped or without hops, is the best drink; if this cannot be taken, then weak wine and water.

Wine does harm, and increases the pain. Water is bad, unless taken always through life. Over-cooling draughts do not cause pain as wine does; they cause death.

If wine has been long taken it must not be left off suddenly and entirely. Sherry is better than Rhenish or French wines.

Late hours are bad—next to bleeding and purging.

Tranquility of mind is essential.

But far above everything else is bodily exercise ; but unless taken daily, even exercise will be useless. This also must not be excessive.

The exercise of driving should be taken *in* the fits ; riding on horseback, except in old age or when there is calculus, *out* of the fits.

All these things, however, will not absolutely prevent the recurrence of fits. A radical cure of gout "lies, like truth, *at the bottom of a well.*" "Some such remedy may at some future time be discovered."

The very great value of these remarks of Sydenham will, I hope, be a sufficient apology for the space they have occupied. Nothing could more distinctly show the failure of drug treatment, up to that time, of a disease only too well known in every age of civilised life.

The next author to be noticed is *Dr. Cheyne*,* who, in 1721, advances a step further in the discovery of the nature of the *causa continens* of gout. He declares it to consist in tartarous and urinous salts introduced into the blood by the food ; the former from the wine drunk, the latter from the animal food eaten. Dr. Cheyne's hypothesis is that in gouty persons the capillaries or "smallest vessels are narrower and more stiff or tense than those of others." That a fit of gout is caused by the obstruction which these salts meet with in the capillaries where they are compressed in the joints, and thus pain, inflammation, and fever arise from "an effort of nature to throw off these salts through the stiff and narrow strainers."

> "Hence it is evident there can be only two direct ways of treating the gout with any prospect of success. The one is by stretching and widening the capacities of the small vessels, and relaxing their fibres. The other is by lessening the quantity of the salts introduced into the fluids by the food."

The first intention can be best answered by "wisely managed exercise"—not too violent, and "moderation in eating and drinking being joined with it." And

> "There be two distinct ways of lessening the quantity of the salts which produce the gout. The first is, by a total abstinence from, or a great abstemiousness in flesh, fish, and strong liquors, which introduce those salts into human fluids. But this requires great caution, because an entire vegetable diet weakens all the digestive powers and all the functions of life ; and because this diet once entered upon is never after to be changed under the danger of certain death."
>
> "The other direct way of banishing the salts out of the habit is by evacuations. Sydenham, otherwise a most accurate observer of nature, and a most judicious practitioner, has been the occasion, I think, of a great mistake in the management of the gout, by forbidding almost all evacuations."

"The secondary or less direct methods of relieving the gout are first, dilution by proper liquors ; secondly, strengtheners of the instruments of the digestion." The first are Bath and other waters ; dwarf-elder tea ; trefoil tea ; light, quick, green tea ; and small spicy bitters in water.

For the second, "*the Jesuit's bark*, (cinchona) in generous claret is the most powerful strengthener of relaxed fibres in the instruments of digestion and the greatest antidote of the urinous salts." *Chalybeates* and the "*glans quercina* or action," may be added.

> "*Mercury*, by its weight, seems to offer fairest for breaking the gouty salts, for relaxing the fibres, and for enlarging the small vessels, and the fact is, that by a full and free salivation gouty people have been freed from all its symptoms

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* *An Essay on the Gout*, by Geo. Cheyne, M. D., F. R. S., 3rd. Ed. 1721

for several years. But it is also matter of fact that the body becomes in a worse state in respect of the future fits, than it would have been under the common symptoms; the man is seldom or ever the same as he was before the salivation."

During the fit several medicines are to be given, "such as Gascoin powder, Goa stone, bezoar, Sir Walter Raliegh's cordial, diascordium, confection of Alkermes, and the like."

In the intervals a succession of specifics are to be administered. The first is.

> "*Rhubarb*, taken regularly, once, twice, or oftener a week, in such dose as to procure two or three motions." "It is worth taking notice that all the preparations of this medicine serve only to spoil it."
>
> "Next to rhubarb, and even far before it, I would recommend *sulphur*. It is but in little use at present in physic, except in the itch and the piles, and yet in the whole extent of the *Materia Medica* I know not a more safe and more active medicine."
>
> "I have known half a drachm of powdered sulphur, taken regularly twice a day, in a spoonful of milk, prevent the fit for many years, and lessen both its pain and duration when it happened, for it moved the body gently once or twice a day." "Especially if to these (rhubarb and sulpur) be added plentiful dilution by some bloodwarm infusion of a spicy and diuretic plant in water, so as to provoke a gentle breathing sweat, and pass freely by urine. Thus large draughts of sage, dwarf-elder, buckbean, or green tea; but especially of weak whey made on old Mountain, drunk blood-warm, and on an empty stomach, and joined to any of the now mentioned medicines."
>
> "But beyond all other things, a well ordered course of *Bath* waters, with chalybeates, and warm bitters, and a frequent and regular use of stomach purges, will be found to succeed best."
>
> "For a concluding observation," Cheyne, like Sydenham, says:—
>
> "Temperance only, divine, innocent, joyous temperance, can cure or effectually relieve the gout. For let us, or our brethren the quacks, brag what we will,
>
> "Tollere nodosam nescit medicina podagram."

It would have been well for the sufferers from gout, if the moderate counsels of Sydenham had never been further departed from than they were by the rhubarb and sulphur of Cheyne. But this did not happen. The more violent measures continued to be the favourite plans.

Dr. Dover,* in 1732, gave the result of forty-nine years of practice, as a legacy to his country. His treatment of disease is not unfairly represented by a patient who was "very weak in a consumption," and who recovered after having been "blooded at least fifty times;" and by his favourite prescription, an ounce of quicksilver to be taken every morning, for a month, as "the most beneficial thing in all the world."

On Gout, he says:—

> "There have been so many unsuccessful attempts made to master this disease, that patients have very little faith left, and, as they commonly say, have no hopes from any thing but patience and warm flannel: but with submission, keeping the part warm is wrong, because it is *proprium caloris attrahere;* and does, beyond doubt, attract gouty matter to the part."

He then prescribes tamarinds, senna, rhubarb, manna, purging syrup of roses, syrup of buckthorn, and elixir proprietatis, with posset-drink between the motions; and opium, saltpetre, tartar vitriolated, ipecacuanha and liquorice on going to bed —"covering up warm and drinking a quart or three pints of posset-drink while sweating."

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* *The Ancient Physician's Legacy to his Counry.* 1732.

"Mynsycht's elixir of vitriol taken often in large quantities, most certainly destroys gouty matter, yet for some time it may cause pain ; but taken in its due latitude, if water will quench fire, it must in the end have its desired effect."

Dr. Cadogan[*] (1760) and his opponents[†] appear next in a very lively discussion on gout and its treatment. I must content myself with a single extract from his book, as a specimen of the style in which the subject is handled :—

The gout is so common a disease that there is scarcely a man in the world, whether he has had it or not, but thinks he knows perfectly what it is. So does a cook-maid think she knows what fire is as well as Sir Isaac Newton. It may therefore seem needless to trouble ourselves to say what it is : but I will venture to say what I am persuaded it is not ; though contrary to the general opinion. It is not hereditary, it is not periodical, and it is not incurable."

Cullen,[‡] in 1780, after trying all plans and meeting with nothing but disappointment, fell back upon "patience and flannel alone." His discouraging experience makes him say :—

"I am much disposed to believe the impossibility of a cure of the gout by medicines ; and more certainly still incline to think, that whatever may be the possible power of medicines, yet no medicine for curing the gout has hitherto been found."

Heberden,[§] who was at the head of his profession in London while Cullen was flourishing in Edinburgh, on the contrary, writes, in 1782, against flannel and rest, and says :—

"I have known several, who instead of nursing a beginning gout with warmth and repose, have used the utmost resolution and exertion in moving and exercising the limb, which they found themselves gradually able to do more and more, till at last they recovered its perfect use, free from any feelings of pain, and without any manifest ill consequences."

"The great Dr. Harvey, as I have been told by some of his relations, upon the first approach of gouty pains in his foot, would instantly put them off by plunging the leg into a pail of cold water."

"I do not recommend Dr. Harvey's example as proper to be imitated, though it is known he lived to a good old age ; but I am not warranted by any experience to condemn the practice of endeavouring by exercising the limb to prevent the gout from settling there." "I never could see any reason for adding at all to the usual covering of the limb." Heberden gave a variety of stomach medicines, but he adds, "we are still greatly in the dark about the causes and effects of gout, and the right method in which it should be treated."

Mason Good,[‖] who was also himself a great sufferer from gout, contends, in 1822, that when the constitution is otherwise healthy and vigorous, what is called the antiphlogistic treatment may be fully carried out, without fear of a metastasis to an internal organ. For several years he obtained, in his own person, great benefit from the external use of cold water; but afterwards, as his general health became weaker, he confined himself to the wine of colchicum.

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[*] *A Dissertation on the Gout*, by William Cadogan, Fellow of the College of Physicians. Sixth edition. 1771.

[†] *Observations on Dr. Cadogan's Dissertation on the Gout*, by William Falconer, M. D. Second edition. 1772. &c.

[‡] *First Lines of the Practice of Physic*, by William Cullen, M. D. Ed. of 1812.

[§] *Commentaries on the History and Cure of Diseases*, by William Heberden, M. D. Second edition. 1803.

[‖] *The Study of Medicine*, by John Mason Good, M. D., F. R. S. Third edition, edited by Samuel Cooper. 1829.

Dr. Todd,[*] in 1843, prescribed moderate purging with blue-pill and salines, as Epsom salts, and *alkalies*. In sthenic gout colchicum in small doses, *so as not to excite nausea, vomiting, or purging.* In 1851 he gave opium and sesqui-carbonate of ammonia, with free counter-irritation by mustard and turpentine and blisters, and says, "*lemon-juice* is a valuable remedy."

Dr. W. Gairdner,[†] on the other hand, in 1849, thinks that the watery evacuations of neutral salts are injurious, and that the warm aperients are far better—such as senna,. rhubarb, aloes, jalap, scammony, with warm aromatics, which is consistent with the older writers. But he also recommends small bleedings, which he says, "act as a tonic!" With regard to colchicum, he agrees with Dr. Todd, that it "never more effectually relieves the patient than when it acts *silently and peacefully,* without producing any evacuations whatever, or in any way disturbing the patient's comfort and ease."

Mr. Anthony White[‡] approaches to Sydenham as a writer on gout. In 1818 Mr. White was surgeon to Westminister School, where I had the pain of knowing him, for he ordered Mapleson to cup me, and followed the cupping with a blister, for inflamed eyes from hoopingcough, when I was a boy in the school; he was afterwards President of the Royal College of Surgeons. In 1848 he had been a subject of gout for forty years. He gives us in his paper, first, "the actual state of our knowledge as to the intimate nature of gout," from Dr. (now Sir Henry) Holland. This is - 1. That it is hereditary. 2. A *materies morbi.* 3. Has a relation with lithic acid and the calculous diathesis. 4. Is in the blood. 5. An attack is the removal of this matter. 6. Both liver and kidneys are implicated.

Mr. White considers the cardinal principle to be "a *materies morbi* circulating with the blood." He thinks Dr. Holland is wrong in blaming the kidneys; on the contrary, their action is beneficial in removing the offensive matter. He thinks the gouty poison is not identical with lithic acid, because the paroxysm may occur without excess of this acid in the urine and *vice versâ.* (We shall see this explained by Dr. Garrod.) But the remarkable fact in Mr. White's personal experience is the part played by the *liver* in his case. Whenever he adopted the patience and flannel method, the fit always ended in a violent discharge of bile from both the stomach and bowels. This he could always prevent by taking four medicines, viz., calomel, colchicum, aloes, and ipecacuanha. It was very natural for him to conclude that the principal seat of the gout is the liver. It was so in his case, and such a case may therefore be met with again. But it remains true that Sydenham's experience is much more common, and that the stomach is generally the organ chiefly disturbed.

We now come to *Dr. Garrod,*[*] whose analyses of the fluids in gout have been persevered in for so many years, and who seems to have told us what the *causa continens* of sydenham, the *materis morbi* of Sir Henry Holland, the gouty poison of every body, really is.

In 1848 Dr. Garrod ascertained that the *blood* in gout always contains uric (or lithic) acid; that it is diminished in quantity, or is absent in the urine *before* a fit. So that the failure in its excretion by the kidneys seems to be connected with the accession of a paroxysm, when the uric acid is thrown upon the joint. No uric acid is found in the blood in rheumatism.

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[*] *London and Edin. Medical Journal*, 1843. *Medical Gazette*, 1851.

[†] *Medical Times*, 1849.

[‡] *On the Nature and Treatment of Gout*, by Anthony White, Esq., *Medical Gazette*, 1848.

[§] *Medical Gazette*, 1848. *Medico-Chirurgical Transactions*, 1848, &c., &c.

In 1858 Dr. Garrod is still more definite in his announcements.

In acute gout :—

1. The urine is small in quantity, and the uric acid contained in it is diminished.
2. As the attack is mitigated, much larger quantities are passed.
3. The uric acid becomes again less, but not so little as at the beginning.

In chronic gout :—

The uric acid in the urine is very much diminished ; there is a small amount of albumen ; the urea remains as in health.

Between the attacks :—

The uric acid excreted is less than in health.

As to the influence of *colchicum* (between 50 and 60 analyses) :—

In healthy cases either a slight diminution of urine and uric acid ; or a notable diminution of urine, with an increase of uric acid.

In recovering cases, no positive change ; or both urine and uric acid diminished.

The conclusions of Dr. Garrod respecting the action of colchicum are :—

1. That there is no evidence to prove that colchicum produces its effects upon the system by causing an increased excretion of uric acid.
2. That colchicum is not always a diuretic.
3. That colchicum has no marked influence on the urea.

Dr. Garrod's treatment in 1859 was as follows :—

In acute gout—to give some simple *alkaline* saline with moderate doses of colchicum ; if necessary, purgatives, and to take away a few ounces of blood. If the patient is low, sesquicarbonate of ammonia, and no colchicum ; cotton wool and oiled silk, and a small blister, with amylaceous diet and diluents.

In chronic gout— to augment the various secretions ; restore the digestive organs ; attend to the local mischief ; to regulate carefully the diet ; and to give a new remedy, *carbonate of lithia*, which forms soluble salts with uric acid.

Mr. Alexander Ure,* in 1841, proposed as a chemical remedy, *benzoic acid*. This forms hippuric acid and hippurate of soda in the urine, in the place, as he supposed, of uric acid and urate of soda. In 1849 Dr. Garrod, after giving benzoic acid, found, indeed, hippuric acid in the urine, but that the amount of uric acid was not thereby altered. The effect of the fixed alkali *lithia* has not yet been sufficiently examined to be fully ascertained ; but Dr. Jas. Duncan† says, in 1865, that dilute hydro-chloric acid with cascarilla is of more service than potash or lithia water.

The contradiction on the subject of an alkaline, or an acid treatment, is very remarkable. Dr. Todd in 1843, Dr. Garrod, and others strongly advocate alkalies ; Dr. G. O. Rees, Dr. Todd in 1851, and Dr. Wm. Moore, give lemon-juice, and Dr. Duncan, as just noticed, hydro-chloric acid. Monsieur Trousseau (if I may mention a continental writer) contends that as to alkaline preparations, such as Carlsbad, Vals, and Vichy waters, there is not a more dangerous medication in the world. On the other hand, he does not advocate acids, but peruvian bark, quoting a sentence of Held, who said, "Uno vervo, cortex Peruvianus in podagra divinum est remedium." He calls flannel an evil habit, and recommends washing in cold water in summer, wet sheets,&c., to accustom the body to resist cold.

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* *Medico-Chirurgical Transactions*, 1841.

† *Dublin Quarterly Journal*, 1865.

Amid all this confusion and contradiction there is but one thing respecting gout in which all authors agree, namely, that it rarely, "if ever," occurs in young persons. Perhaps, therefore, the following fragment of personal history may be sufficiently interesting to justify its introduction. My family has been subject to gout. William Sharp, my uncle, whom I succeeded as a surgeon at Bradford, died in about two hours from gout transferred from the ball of the thumb to the stomach. While on a visit to this uncle I had a fit of gout in the great toe, *when about ten years old*, and have never had another. This entire freedom since from gout I attribute, under God, to the abundance of exercise taken every day. Sydenham preferred riding on horseback; this I practised for sixteen years, but was compelled to give it up from the indigestion it caused; since that time all my exercise has been on foot. It may perhaps be useful to add that though always living temperately, I have never lived abstemiously, unless drinking only water till I was twenty-five be considered abstemious living; and that I have been greatly indebted to *pulsatilla* as a remedy for indigestion.

On looking back upon this brief survey of our medical knowledge of gout, a crowd of reflections force themselves upon the mind. Some of these must be noticed before the subject is left.

The hereditary predisposition does exist in some families.

It may be successfully kept in abeyance.

Full living, indolence, and vexation may induce gout in any one, whether predisposed to it or not.

The peccant matter, gout poison, or urate of soda, should be viewed as a product of the disease, rather than as the *materies morbi* or disease itself.

There is a previous derangement of the digestive organs, particularly of the stomach, more rarely of the liver.

It is of less consequence to treat cases of gout as acute or chronic, than to consider whether the patient is in an entonic or atonic condition.

To eliminate the poison of gout should not be the primary object of treatment.

Treatment by evacuations of any kind is a mistake, and in the end does harm.

Chemical treatment, up to the present time, is a failure.

Dr. Garrod's analyses, confirmed by Dr. Harley's, are positive as to the presence of uric acid or urate of soda in the blood of gouty persons; but they are negative as to the action of colchicum upon these substances.

Colchicum is as useful in rheumatism as in gout; and there is no uric acid or urate, but lactic acid, in rheumatism.

The manner of acting, therefore, of small doses of colchicum, is as entirely unknown to us as is that of all other specifics.

The treatment which does most good is specific treatment, which is *silent and secret.* We do not know its nature now, and I believe we shall never know it.

The specifics for the relief of the gouty paroxysm which we know are bryonia, colchicum, rhus, and cinchona.

There are probably others, such as ash-leaves or seeds, germander (teucrium chamædrys), ranunculus, winter-cherry (physalis alkakengi), veratrum viride, piper methisticum.

The experience of Drs. Todd, Gairdner, and Garrod, as to the efficacy of the "*silent and peaceful*" action of colchicum, is strong testimony in favour of homœopathic or specific treatment.

The advice to regulate or augment the secretions is very plausible, but it is fallacious. If we cure disease the secretions will regulate themselves.

To restore the functions of the digestive organs to a healthy state, in the intervals of the fits, should be the first object in the treatment of gout. *Pulsatilla* must not be forgotten in cases like Sydenham's; nor *chamomilla* [illegible]se like Mr. Anthony White's.

Much may be done by specific medicines; but even these must in the end fail, unless they are seconded and supported by a suitable manner of life as regards food, exercise, and peace of mind.

This history [illegible]xperiments on gout is a fair sample of experiments on the sick. And [illegible]s a sufficient proof that these experiments, which have been carried on for three-and-twenty centuries, have failed to establish a principle for the treatment of disease by medicines.—*The Monthly Homœopathic Review.* May 1873.

To be Continued.

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THE MATERIA MEDICA.

30.—CHINA (CINCHONA).

Nat. Ord.: Cinchonaceæ (Rubiaceæ of Jussieu).

Species: Those chiefly used in Pharmacy are 1. *Cinchona Calisaya*, also called *Cinchona Regia* or *Cinchona Flava*, Royal or Genuine Yellow Bark, 2. Cinchona de Huanuco, Grey or Silver Cinchona, and 3. Cinchona Rubra, or Red Cinchona.

Habitat: Peru. Is being naturalized in India.

Off. Part: The bark of the trunk and branches.

Composition: Four alkaloids: 1. Quinine, 2. Quinidine, 3. Cinchonine, 4. Cinchonidine. Three acids: 1. Cincho-tannic, 2. Kinic, 3. Kinovic. One volatile oil or balsamic principle. Colouring matter. And mineral ingredients.

Old School uses: Almost endless, but may be summed up in three words—astringent, tonic and antiperiodic.

Concordances.

Moral and intellectual faculties.—Acon. anac. ars. bell. calc. caust. cham. cocc. graph. IGNAT. *lyc.* merc. natr. *natr-mur.* n-vom. *phosph.* ph-ac. plat. PULS. rhus. sep. *sil.* staph. sulph.

Seat of the diseases.—Acon. anac. ant-crud. ant-tart. *arn.* ARS. aur. BELL. *bry.* CALC. canth. *carb-veg.* caust. *cham.* cocc. *con.* creos. dulc. *ferr.* graph. hep. hyosc. *ignat.* ipec. *kali.* LYC. MERC. natr, *natr-mur.* *nitr-ac.* N-VOM.

PHOSPH. ph-ac. plumb. PULS. *rhus.* sec-corn. SEP. *sil.* spig. stann. staph. stram. SULPH. VERATR.

Morbid states and sensations.—*A*con. *arn.* *ars.* bar. BELL. *bry.* CALC. canth. carb-veg. cham. cocc. colch. con. dig. *ferr.* graph. hell. hyosc. ignat. ipec. *kali. lyc.* mar. *merc.* natr. nutr-mur. nitr-ac. N-VOM. *phosph.* ph-ac. plumb. PULS. RHUS. SEP. sil. spig. stann. staph. SULPH. thuj. veratr. zinc.

Glands.—Arn. BELL. *bry.* calc. jod. lyc. merc. phosph. PULS. *sulph.*

Bones.—ASAF. MERC. PH-AC. PULS. rhodod. rhus. *ruta.* sil.

Skin,—Ant-crud. *arn.* ARS. *asaf. bell. bry. calc.* carb-veg. *caust.* con. dulc. ferr. *graph. hep.* lach. led. LYC. *merc.* natr-mur. nitr-ac. n-vom. petr. phosph. *ph-ac.* PULS. RHUS. selen. SEP. SIL. staph. SULPH. thuj. veratr.

Sleep and dreams.--Acon. *ars.* bell. *bry. calc.* carb-an. cham. graph. hep. *ignat. kali.* lach. lyc. merc. natr. N-VOM. PHOSPH. ph-ac. PULS. ran-bulb. RHUS. sep. *sil.* SULPH.

Pyrosis.—ACON. ARS. BELL. BRY. *calc. cham.* con. *dig. ferr.* graph. hep. hyosc. *ipec. merc.* NATR-MUR. N-VOM. *phosph. ph-ac.* PULS. *rhus.* sabad. samb. selen. SEP. sil. spig. staph. stram. SULPH. *thuj.* veratr.

Time.--Alum. arn. *ars.* ipec. natr-mur.

Exacerbations.—Acon. ant-crud. arn. *ars.* BELL. BRY. CALC. caps. *carb-veg. cham.* cocc. colch. *con.* ferr. graph. *hep.* ignat. jod. kali. lach. led. *lyc.* mang. *merc.* natr. *natr-mur.* nitr-ac. n-mosch- N-VOM. PHOSPH. *ph-ac.* PULS. *rhus.* ruta. *selen.* SEP. *sil.* spig. stann. *staph.* SULPH. thuj. veratr.

Concordances in general.--*Acon. arn.* ARL. BELL. BRY. CALC. carb-veg. caust. *cham.* cocc. *con. ferr.* graph. hep. *ignat.* ipec. kali. LYC. MERC. natr. *natr-mur.* nitr-ac. N-VOM. PHOSPH. PH-AC. PULS. RHUS. selen. SEP. *sil.* spig. staph. SULPH. thuj. veratr.

Antidotes.--*Arn.* ARS. *bell.* calc. CARB-VEG. *ferr.* IPEC. merc. natr. natr-mur. PULS. sep. *sulph.* VERATR.

Hahnemann's Preface.

(Next to Opium there is no medicine which has been more abused to the detriment of mankind than Cinchona. It has not only been considered as harmless, but it has been employed as a specific against weakness, and has frequently been given for months, in large doses, several of which were taken every day.)

In the use of Chinchona physicians have constantly started from a false principle, and have thus confirmed the accusation which I have brought forward against them before the enlightened portion of the public : that the generality of physicians, have omitted to perceive that medicine is, by its object and nature, a science derived from and based upon experience, and that they have substituted delusive conjectures, theoretic dogmatism and accidental, opinions in the place of impartial observations, pure experiments, and the wisdom acquired by practice.

Avoiding conjectures, and traditional, unverified opinions, I determined to ascertain by experiment the pathogenetic action of Cinchona upon the human body, and I found that, as certainly as it cures certain cases of disease, as certainly may it produce morbid symptoms of the most violent kind in the human organism, and lasting a long while. By this means I have refuted the erroneous notion which has been hitherto entertained of the harmlessness, innocent mildness and universality of the curative powers of Cinchona.*

In looking over the subjoined list of symptoms, which have been elicited from Cinchona by conscientious and healthy provers, it will be seen that the pernicious effects of that drug, and the frequently incurable aggravations of the original disease produced by prescriptions of which Cinchona was the chief ingredient, were owing to the excessive quantity in which the drug was administered, and because it was not suited to the case. Previous to these provings, physicians did not know that the aggravations which they, in their kindness to themselves, mistook for a natural and unavoidable development of the disease, were medicinal symptoms inherent in Cinchona.

But I forbear censuring those who have abused Cinchona, and I proceed to lay my own views of the nature and action of that drug before my readers :

1. Cinchona is one of the most powerful vegetable drugs. If Cinchona be indicated as the true specific, and if the patient's organism be vehemently invaded by the disease which is to be cured by Cinchona, in that case one drop of the 12th potency of Cinchona, containing one quadrillionth part of a grain, is sufficient to cure the disease perfectly, without another dose being necessary, except in very rare cases. I was led to the use of such small doses neither by prejudice nor caprice ; experience and observation induced me to abolish the larger doses, which, even when they cured, acted still more powerfully than was necessary. I therefore substituted smaller doses in their places, and continued to reduce the doses until I had arrived at a point in my subdivisions of the original substance, where

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* As early as the year 1790, (see W. Cullen's Materia Medica, Leipzic, p. 109, Note,) I tried Cinchona upon myself, for the sake of ascertaining the relation existing between intermittent fever and the pathogenetic action of Cinchona. This first trial was the dawn of that bright light which now shines in the treatment of disease ; it led me to establish and to demonstrate the law that diseases can only be cured by remedies, the pathogenetic action of which upon the healthy body is similar to the symptoms of the disease. This law is so true, that all the venom which thousands of prejudiced practitioners have poured forth against it, is no more able to efface it, than the vile slanders of Riolan and Co. have been able to nullify Harvey's great discovery of the circulation of the blood. The opponents of Harvey's sublime discovery fought against him with the same wretched arms that they now employ against Homœopathy. Avoiding, just as much as my own opponents, to repeat Harvey's experiments in a faithful and correct manner, (lest they should be convicted of error,) they relied upon slanderous vituperations and the remote age of their error, (for Galenus and his predecessors had arbitrarily established the fact that a sort of spiritual ether, *pneuma*, was floating through the arteries, and that blood did *not* originate in the heart, but in the liver,) and they exclaimed : *Malo cum Galeno errare, quam cum Harveyo esse circulator.* This infatuation, this obstinate boasting of the antiquity of their illusons, (some thirty years elapsed before Harvey enjoyed the satistaction of seeing his doctrine universally recognized,) was not more foolish than the existing infatuation and gratuitous rancor against homœopathy which exposes to the world the injurious rubbish of old and new arbitrary and untenable rules of practice and teaches the great art of curing diseases speedily, mildly and permanently, with the certainty of success, and agreeably to the answers which interrogated nature makes with precision to the questions addressed to her by her disciples.

the curative action of the dose was justly proportioned to the disease, without producing any unnecessary medicinal symptoms.

2. A small dose of Cinchona acts only a short while, scarcely a few days; a large dose for several weeks, unless the organism frees itself from the drug by vomiting, diarrhœa, etc. This shows how foolish it is to take several large doses a day, as is the case in common practice.

3. If the homœopathic law be correct, which is the case; if it be a truth founded in nature that diseases can only be safely and permanently cured by remedies the pathogenetic symptoms of which are similar to those of the disease, we shall find, in looking over the symptoms of Cinchona, that this drug will cure only a small number of diseases.

When I say "*cure*," I mean a recovery undisturbed by secondary ailments. Or do practitioners attach a different meaning to the word "*curing*," which is unknown to me? Do they mean to consider intermittent fevers, which had been suppressed by means of Cinchona, cured? I know that almost all typical diseases, and also all intermittent fevers, although they do not correspond to Cinchona, may be suppressed by powerful doses of Cinchona; but does this suppression mean that the poor sufferers are cured? Has not their origial disease been converted to a worse one, which does not, indeed, return at separate periods of an equal duration, but which is continuous, though more concealed? The patients do no more complain of the regularly outbreaking type of the fever; but behold the livid color of their bloated countenances, the dimness of their eyes! Behold how asthmatic they are; behold their hard and distended abdomen, the hard swelling of their loins, their lost appetite, their repulsive taste, the oppression which every nourishment produces in their stomachs; behold their undigested and unnatural stools, their anxious, unrefreshing sleep, interrupted by all sorts of dreams! See, how they crawl about, as it were, faint, joyless, desponding, susceptible, out of humor and stupid, tormented by a greater quantity of ailments than was caused by their intermittent fever! How long does such a Cinchona-disease frequently last, which can only be relieved by death!

Is that health? It is not intermittent fever, I grant; but I say, and I challenge contradiction when I say so, it is not health; on the contrary, it is another and worse disease than intermittent fever; it is a Cinchona-disease, worse than intermittent fever, otherwise this could not have been suppressed or rather suspended by it.

And even if the organism recovers from this Cinchona-disease in a few weeks, in this case the intermittent fever reappears in a worse form, the organism having suff. red so much.

If then Cinchona be continued in larger doses, in order, as is said, to prevent future attacks, in this case a chronic Cinchona-cachexia is formed, the symptoms of which will be found feebly delineated in the subjoined list.

Our physicians, not knowing when Cinchona is suitable, their cures by means of Cinchona are suppressions of the original affection by exciting a more violent Cinchona-disease, which is said to be a development of new symptoms, and a proof of the obstinate and malignant nature of the disease, the genuine symptoms of Cinchona not being known.

Physicians who are unwilling to lull their consciences to sleep, and whose hearts still vibrate for the well-being of their fellow-men, may learn from the subjoined list of symptoms, under what circumstances and in what conditions of the system Cinchona can be used with benefit and success.

There is one species of abuse of Cinchona bark which is absolutely intolerable and unjustifiable; it is practised by the adherents of the pretended rationalist school in medicine, in giving Cinchona for every sort of weakness.

There is no disease which does not bring on a state of weakness either by its own influence, or by the pernicious and exhausting influence of the unsuitable mixtures which are employed as curative means. For such states of weakness Cinchona has been given in large doses, in the shape of an infusion, decoction, extract, electuary or powder, the patient being treated with Cinchona for weeks and months, as if it were really conducive to his preservation. I shall say nothing of the results of such treatment. Let the bills of mortality testify to the havoc that has been produced by the abuse of Cinchona, and let those innumerable wretches utter their complaints, upon whom the abuse of that substance has entailed asthma, swellings, jaundice, pains of every kind, spasms, degenerations, abdominal sufferings and hectic fevers.

Let me appeal to the common sense of those practitioners, and ask them how they can dare to use bark in that host of diseases which are characterized by weakness, either per se, or where it has been superadded by the so-called regular treatment? How can they imagine that a sick man can be strengthened whilst he is yet suffering with his original disease, which is the source of his weakness? Have they ever seen a patient recover from his original disease by the use of a really suitable remedy, who did not recover his strength in proportion as the disease left him? But if the weakness of the patient can only be removed by curing the disease, and if, on the other hand, that weakness must necessarily remain with the disease, how wrong and absurd must it appear to every intelligent man, that an attempt should be made to strengthen the patient by bark and wine, whilst the disease is yet upon him! These practitioners are unable to cure the patient, but they undertake to strengthen him, even when left uncured. If bark have power to invigorate every patient, in that case it ought also to be a panacea for all diseases! But the attempt to restore a patient's strength while he is yet under the influence of disease, is extremely foolish.

It is true that, by the first doses of bark, the vital powers of the patient, were he ever so sick, are somewhat excited; he raises himself in his bed alone; he wants to get up and be dressed; his voice becomes stronger, firmer; he attempts to walk about the room; he puts on a cheerful countenance; he feels a sort of appetite,—but every careful and correct observer sees that this excitement is unnatural.

In a few hours the patient sinks back into his disease more deeply than ever, and death is frequently hastened on by such treatment.

The strength which is imparted to the patient by artificial stimulants, must be and will always be accompanied by the most pernicious consequences, except in those few cases where the totality of the symptoms corresponds to the symptoms of bark. In this case the weakness necessarily disappears together with the disease. But, as was said before, there are but few diseases in which Cinchona is a proper curative agent, curing speedily, permanently, and without leaving any secondary symptoms. In all the other cases Cinchona must prove the more hurtful, either as a remedial or strengthening agent, the larger the doses in which it is administered. This is also true of any other agent improperly administered.

In order to administer a drug, Cinchona or any other, with benefit to the patient, physicians must, in the first place, ascertain its pathogenetic symptoms; otherwise the patients will be injured more than benefited.

Wherever Cinchona is used as the true, homœopathic, curative agent, (not in accordance with theoretical views, deceitful names, or the seductive authority of prejudiced leaders,) there it will impart strength to the patient; it strengthens the patient by removing the disease; strength can only be supplied by the organism when it shall have been freed from disease; it cannot be infused as so much matter by a decoction of Cinchona, or by wine.

There are cases where weakness is, so to say, the disease itself. Such cases are: weakness from the loss of humors, from hemorrhage, excessive blood-letting, excessive galactirrhœa, ptyalism, loss of semen, excessive suppuration, (copious sweats,) and frequent diarrhœa; in all these cases the other symptoms of the patient generally correspond to the symptoms of Cinchona. If these losses be not kept up by some disease lurking in the back-ground, a few small doses of Chinchona, of the size mentioned above,* are sufficient to the cure, provided the action of the medicine is supported by nourishing diet, free air, cheering social intercourse, etc. Frequent and large doses would be as hurtful in this case, as the excessive use, even of the best things in the world, is hurtful in every instance.

The usefulness of Cinchona in the treatment of diseases resulting from the loss of humors, has led the older physicians as by instinct to a method of cure which has become more prevalent than any other, *the depleting treatment.* Under pretence of loosening the morbid matter, and removing it from the body by means of frequent doses of so-called dissolving cathartics, by means of an increased secretion of urine and sweat, (through quantities of warm drinks and tepid and warm baths,) by venesection and bleeding. ptyalism, expulsion of pretended impurities through issues, setons, etc., the organism is weakened and even broken down. If this treatment had been kept

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* I mean to say here, as elsewhere, that minute doses are sufficient under certain circumstances. Nevertheless common practitioners persevere in misunderstanding me, because they do not know that a cure can be effected with one single, simple remedy, when no other artificial stimuli influence the treatment. They are instinctively prone to mix up, in idea, the proposed treatment by means of one remedy, with their usual acompaniments of stimulating substances. Even when a physician sometimes prevails upon himself to give a patient suffering with an acute disease, one remedy at a time, nevertheless he accompanies it with all sorts of medicinal substances, considering them as mere domestic remedies. He cannot get along without resorting, as accompaniments, to a poultice of aromatic or dissolving herbs to be applied to the affected part, (as if these herbs did not act upon the olfactory nerves of the patients and did not influence the system generally through the skin;) or to a liniment, fomentation, gargle, mustard-plaster, vesicatory, baths either entire or partial, injections of Valerian,

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Chamomile, etc., (as if all this amounted to nothing, and did not influence the general state of the patient through the skin, mouth, rectum, etc. ;) or to a tea of mint, chamomile, juniper, or so-called pectoral. herbs, etc., (as if a decoction of such herbs or flowers had no power.) In company with such accessory substances, which, although they are looked upon as innocent, domestic remedies, are nevertheless violent medicines, the drug which is administered internally, even when given in a large dose, cannot possibly exert its genuine action, and a small homœopathic dose would so much the more be without effect. *By administering only one remedy at a time, sensible men understand that the remedy shall be administered without any accompanying medicinal influences.* To prescribe in this way it is necessary that a physician should know what is truly medicinal, and what not. As long as he is unable to distinguish these two orders of substances, he must necessarily look upon herb tea, herb injections, herb poultices and baths, salts, etc., as nonmedicinal. This point is still much more neglected in the treatment of chronic diseases. Beside the medicine, the patient is permitted : spiced beer, vanilla chocolate, sometimes even strong coffee, hyson, bishop, (under pretence of strengthening the stomach,) liquors, all sorts of spices and spiced sauces—these things being supposed to merely strengthen the stomach without establishing any medicinal influence—chopped herbs, wine, tooth-tinctures, tooth-powders composed of medicinal ingredients, and which are nevertheless considered harmless because of their not being swallowed, as if medicines, when simply taken into the mouth or inhaled, did not act upon the whole organism through the irritable living fibre, just as much as when swallowed and brought into the stomach !—and moreover a number of perfumes : ambra, rose-water, peppermint, lavender, neroli, oil of cedar, eau de cologne, etc., besides smelling-bottles, scented soap, powders, pomatum, and many other refinements of that sort. 's such a choas of medicinal extras necessary or even only useful to the recovery of patients and the maintenance of health ? It inflicts a thousand injuries, and has perhaps been invented by physicians for the sake of spoiling and stimulating the organisms of fashionable people. It is a shame that physicians should wink at the ruinous use of such articles of fashion. This confused commingling of stimulating essences, tinctures, powders, both those consecrated at the shrine of fashion, and those introduced by the physician as concomitants of the leading remedies, has become so customary that no physician would dare to think of one remedy being able to cure disease, especially when this remedy is administered in a homœopathic dose. Conradi, in his "*Outlines of Pathology and Therapeutics,*" must have had reference to such a method of cure when he says that the action of such small doses, insisted upon by me, exceeds all belief. If Conradi had known that the accessory stimulants which are used in common practice, excercise a powerful medicinal influence, he would not have made that remark. The difference between administering a remedy with or without those stimulants, is immense.

Whereas the gourmand after rising from a dinner, would scarcely perceive the sweetness of a grain of sugar upon his tongue, irritated by spices, the man who is satisfied by simple fare, would taste that sweetness in the morning to an excessive degree. In the midst of the movement and tumult of certain quarters of a city we may not even hear the words which a friend may shout into our very ears, whereas, in the depth of a silent night, we should even hear one single note of a flute at a great distance.

In the same way does an organism which is perfectly free from medicinal influences, perceive the slightest impression imparted to it by a remedy which up a sufficient length of time, which became an easy business, owing to the favorite use of mild cathartics, two things resulted from it: First, the irritation of the intestinal canal was kept up until the acute disease, which was hushed by that artificial irritation, had run through its natural course: and secondly, a state of weakness was induced by the depleting treatment, which could only be removed by Cinchona; how this final cure was obtained, no one saw. In the same way, the ordinary tertian fevers of spring, and most other intermittent fevers, which run through their course in a few weeks, were protracted into months of rational (!) treatment, and, in the end, the ignorant patient was glad to escape with his life, *whereas a truly scientific cure might have been effected in a few days.*

Hence the constantly repeated warnings in the so-called practical writings, not to give the bark in intermittent fevers, till all (pretended) impurities should have been washed out of the system, or, as modern practitioners term it, till the morbid matter should have been sufficiently dissolved, or, in other words, till the patient should have been sufficiently purged, which, in fact, amounts to this, that the artificial intestinal irritation ought to be kept up long enough to last longer than the natural duration of the fever, and that the weakness consequent upon that loss of humors, should afterwards be cured by Cinchona.

This is what physicians call treating a disease methodically and rationally in very many cases.

It would be just as proper to rob widows and orphans for the purpose of building a poor-house out of the proceeds. * * * * *

The primary effect of Cinchona is to open the bowels, hence it will cure certain kinds of diarrhœa, provided the other symptoms correspond.

In cases of humid gangrene on the outer parts, the other symptoms of the disease will be generally found to correspond to the symptoms of Cinchona; hence it will cure that condition.

The frequent and morbid excitement of the sexual organs, resulting in an involuntary emission of semen, and caused even by slight abdominal irritations, is permanently relieved by Cinchona.

Pain, which is excited by merely moving the affected parts, and which gradually rises to the most fearful height, and is in general similar to the pain produced by Cinchona, has frequently been cured by a single drop of the 12th dilution of Cinchona, even when the attack had returned frequently; the pain disappeared as by enchantment, Cinchona being homœopathic to that symptom.

corresponds to the symptoms of the disease by which the organism has become affected.

Small doses are so much more certain to exercise their specific effect, as the organism does not expel them by force; whereas a large dose is expelled by vomiting, purging, by the bladder, by sweat, etc.

May I, in conclusion, hope that that which has been said above, will suffice to show practitioners, that homœopathic medicines can perform the wonders which are claimed for them, only when their influence is left undisturbed by other stimulating agents?

Bark will scarcely ever be found useful except when the nightly rest of the patient is disturbed similarly to the disturbance which characterizes Cinchona.

Some cases of suppuration of the lungs (especially when characterized by stitches in the chest, increased or excited by pressure from without,) may be cured by bark, if all the other symptoms correspond. In that case a few doses of the above mentioned dilution, when given at long intervals, are sufficient to a cure.

Certain forms of jaundice may likewise be cured by Cinchona as their homœopathic type.

Certain forms of intermittent fever are cured by one dose of bark, when all the symptoms correspond, and the dose is given directly after the attack, previous to the preparations for a few paroxysm having been accumulated in the system. In order to suppress the type of an intermittent fever to which Cinchona is not homœopathic, it is customary to administer large doses shortly before the paroxysm sets in, in which case that violent suppression is more easily accomplished.

Marsh-intermittent can only be cured by Cinchona when the patient remains out of the fever-region during the whole of the treatment. The cure is impossible while the patient remains constantly exposed to the cause of the disease. * * * * *

The attempt has been made to substitute drugs in the place of Cinchona, which has, however, a peculiar and perfectly characteristic influence upon the human organism. But how foolish to suppose that the medicinal virtues of Cinchona can be inherent in another totally different substance! Is not every animal, every plant and mineral something individual and perfectly distinct from all other beings of the same order? Will a Cinchona-tree ever be confounded with a willow, or an ash, or a chesnut? And if these things are so different even on their surfaces, where the difference is only perceived by one sense, the eye, shall their internal difference, their different and peculiar action upon the living organism, remain unheeded? Is not this difference the highest which distinguishes one created substance from another in reference to man? Or shall we with Cullen and others consider every thing which has a bitter and astringent taste, equivalent to Cinchona, something like Cinchona; and shall we set up the sense of taste, which is scarcely fit to discriminate between the taste of one substance and another, as the highest judge of the medicinal efficacy of different plants? I should say that it is scarcely possible to proceed with less discretion in matters concerning the highest earthly good of man.

I grant that all the medicinal substances which have been resorted to in the place of Cinchona, have cured certain kinds of intermittent fever; but the very fact that those substances have cured even when, according to the statements of those who employed them, Cinchona would do no good, shows, that the fevers which could only be cured by those substances, were different from those to which Cinchona corresponds.

Cinchona differs from other medicinal substances not only by its bitter and astringent taste, and by its so-called aroma, but there resides in its whole inmost nature an invisible, dynamic agent, which can never be separated as a material something from the body of the substance, and which distinguishes that substance from all others as respects their influence upon the human organism.

Every substance which is recommended in intermittent fever, has a peculiar influence upon the human organism, different from that of any other substance, according to eternally unchangeable laws. God intended that every medicinal agent should be distinguished from other agents, not only by its shape, taste, color, ect., but also by its internal dynamic properties, that we might be enabled, through this variety, to cure the endless number of morbid phenomena with which man is visited.

If any one of those agents has cured cases of intermittent fever, (which I am not disposed to deny, wherever the agent has been administered uncombined with others,) and if any other agent was unable to cure those same fevers, does it not follow that the fevers which could only be cured by certain agents must have been dsfferent from fevers which could only be cured by certain other agents? There must certainly exist the same difference between the fevers that there is between the remedies used to cure them; and vice versa, the remedies must differ as much as the diseases, and cannot, therefore, be used in the place of one another.

Boundless Nature is much more profuse in creating medicinal agents than the compilers of our systems of Materia Medica imagine; and she produces a corresponding variety of abnormal states of the organism, a good deal more than a bungling pathologist is able to comprehend, who would like to reduce the legion of morbid states to a few names,* probably for the sake of facilitating the business of prescribing, committing a certain number of prescriptions for each name.

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* Scarcely any physician, except Hippocrates, took down the symptoms of a disease, unmixed with the symptoms of drugs. Most other physicians, in their descriptions of cases, mix up natural and artificial symptoms.

We might leave the fact of iron being mixed in a great many prescriptions, and the patient being made to swallow a preparation looking very much like ink, unnoticed; but it behooves us to tell physicians that such a preparation possesses neither the virtue of Cinchona, nor iron.

This follows from the fact that Cinchona and iron may be used, and are used to neutralize each other's injurious effects, provided those effects correspond to the pathogenetic symptoms of the drug to be used as antidote.

The protracted use of large doses of Cinchona frequently produces acachectic state, which can only be removed with great difficulty by other remedies, especially by IPEC., ARNICA, and sometimes BELLADONNA. VERATRUM ought to be used when the abuse of Cinchona has produced coldness of the body, with cold sweats.

(To be Continued.)

EDITOR'S NOTES.

THE ERUPTION OF SMALL-POX AND THE PATHOLOGY OF ITS DISTRIBUTION.

Mr. Archer Farr proves (*Med. Times & Gaz.* May 3) that the distribution of the eruption of small-pox is rugulated more by the arterial supply of a part that by its innervation. This is proved by natural appearance of the eruption first in the face, then in the upper extremities, then on the trunk, and lastly on the lower extremities. But it is also experimentally proved by the artificial production of a crop of pustules in parts in which the eruption very sparingly appears. For instance, if a portion of the abdomen be kept in a state of hyperæmia by the continued application of some irritant, say turpentine stupe, then a crop of pustules will appear in this circumscribed area. And this sort of treatment has been resorted to by Mr. Farr with a view to lessen the disfigurement of the face.

EUROPEAN CHILD-LIFE IN INDIA.

In a paper on the above subject read at a meeting of the Medical Society of London on April 7th, Dr. Fayrer expressed his firm conviction that the Anglo-Saxon cannot colonise India, as he has done Australia and America, that is, he cannot "establish himself, take root, continue his race, people the country, and of course in so doing displace, or rather replace, the autochthones, and his older Aryan brethren, who have become acclimatised during an occupation of many centuries." From the reports of the Asylum founded in Calcutta in the year 1815 for children whose parents were European, the following facts stand out, namely, that the stimulating effects of an almost tropical climate never fail to assert their influence, as a rule, the girl of sixteen or seventeen being two or three yea s in advance of a girl of that age in an European climate. The children do indeed appear to have a great immunity from diseases peculiar to the country, as well as others of a severe kind, but the death-rate is about double that in England, as the following table shows :—

	England	India	
Under 5 years	67·58 ...	... ... 148·10	per 1,000.
From 5 to 10 years	8·80 ...	... ... 17·73	„
„ 10 to 15 years	4·08 ...	... ... 11·51	„

EPILEPSY FOLLOWING INJURY OF A NERVE, AND CURED BY EXCISION OF THE INJURED PORTION.

We learn from the *British Med. Journal* (May 24) that E. Graf, in an account of the reserve-lazareth at Düsseldorf during the war in 1870-71, contributed to the *Wiener Medizin. Wachen-schrift* (April 19), "gives the history of a case in which a gun-shot wound of the soft parts, an inch and a half above the right elbow, was followed by anæsthesia and paresis of the first three fingers. The wound was very painful, and the patient had symptoms of traumatic delirium (without fever) and formication in the injured limbs. The cicatrix remained tender. Fourteen days after the healing of the wound, the patient suddenly had a paroxsysm of epilepsy, and soon afterwards another. The attacks returned several times daily for several days, and were accompanied with violent pain passing from the cicatrix to the neck. The medican nerve, which was involved in the cicatrix, was laid bare, and a very indurated portion, an inch and a half long, was excised. After this the pain and epileptic attacks altogether and permanently ceased. The thumb had some power of motion, and its sensibility was not quite lost. The index and middle fingers remained without motion or sensation."

PARAPLEGIA INDUCED BY PROLONGED USE OF CHLORAL HYDRATE.

Mr. Henry J. Manning, Medical Superintendent, Laverstock House Asylum, reports in the *Lancet* for May 17, the cases of two gentlemen, who were the subjects of monomania with occasional exacerbations of excitement and obstinate sleeplessness. They were put under the following treatment:—In the case of one, an elderly gentleman, 5 grain doses of chloral twice daily, with 30 grains on alternate nights, were prescribed. In the other case, a man in the prime of life, 10 grains of chloral twice a day, and 40 grains with 10 minims of Battley's solution of opium every night, were prescribed. In both cases daily walking exercise for two or three hours were insisted upon. After 7 or 8 week's treatment, the first patient became unaccountably depressed and very weak, especially in his lower limbs, the weakness increasing until he was compelled to give up his daily walks from sheer inability to put one leg before the other. In the case of the other patient, after 25 days' treatment, there appeared the same depression, the same weakness, and, suddenly one morning, complete loss of power in the lower limbs, and a very alarming condition of collapse—cold surface, fluttering pulse, and so on. There was no loss of sensation, nor was there any hyperæsthesia; but there was in the one case partial, and in the other absolute, loss of muscular power in the lower limbs. The chloral being stopped, and strychime, the antidote recommended by Liebreich being administered, muscular power was gradually restored in both the patients.

These cases prove that the chloral hydrate is a cumulative poison and should never be used continuously for a long time, without the most careful watching. It might, in susceptible patients, give rise to apoplexy as it gave rise to paraplegia in the cases under notice.

POISONING BY CARBOLIC ACID.

The following very interesting case of Poisoning by Carbolic Acid is reported in the *British Medical Journal* (May 24) by Dr. George J. Hearder, Medical Superintendent, Lunatic Asylum, Carmarthen :—

About ten o'clock on the morning of November 27th, I was called to see a man aged 36, who had swallowed carbolic acid with suicidal intent. He said that he had "swallowed poison." About five minutes afterwards, when I first saw him, he was evidently in mortal agony. His countenance was livid, his eyeballs protruded, and he uttered a continuous subdued cry, of wild and fear-inspiring tone, which was broken only by short gasping attempts at respiration, and ineffectual endeavours to vomit. This condition was followed almost immediately by a state of profound insensibility. Olive oil was poured into his mouth while the stomach-pump was being prepared. Warm water was then injected into the stomach, and withdrawn strongly impregnated with carbolic acid. A second injection of olive oil was administered, and this likewise, when extracted, brought with it a portion of the poison. The patient died, apparently asphyxiated, about thirty minutes after taking the acid.

From the first the pulse was very rapid, and so feeble as to be scarcely perceptible : the breathing was performed only by short and infrequent gasps, and the surface of the body was of a deep livid hue ; the pupils were unaffected. Great difficulty was experienced in passing the gum elastic tube into the stomach. It was necessary to keep the forefinger of the left hand at the back of the pharynx, to prevent it curling up, while persistent and somewhat forcible pressure was employed to overcome the resistance made by the firmly contracted state of the œsophageall muscle.

Sectio Cadaveris Twenty-six Hours after Death.—The superficial veins, especially those of the upper extremities, were distended with blood. The lips and chin were slightly excoriated. The dura mater was much congested with dark venous blood. The arachnoid at the vertex was thickened by gelatinous deposit. The brain-substance was apparently healthy. The lungs, filling well their cavities, were slightly emphysematous in front, and passively congested posteriorly; there were old adhesions at both apices. The pericardial sac contained about an ounce of serum. The heart was healthy; all its cavities were full of blood, which was very dark, perfectly fluid, and without a trace of coagula. Its microscopic examination revealed nothing abnormal. The mucous membrane of the larynx, trachea, and its subdivisions, was highly congested, granular, and softened; the tubes contained small quantities of olive oil and carbolic acid. The tongue appeared shrunken, pale, and indurated. The papillæ were markedly prominent; the lenticular papillæ particularly so. The mucous membrane of the œsophagus was peculiarly white and glistening, softened and peeling off as if scalded. The inner surface of the stomach was extensively softened and eroded, its mucous and muscular coats being reduced to a state of pulp. The parts surrounding the orifices had sustained most injury, and these portions were of a dull deep slate colour. The small intestine was similarly affected, in patches of about the size of a crown-piece, to within a few inches of the cæcum. The liver, spleen, and kidneys were healthy.

JOHN STUART MILL'S LAST ILLNESS.

It is difficult to say whether Mill was great as a philosopher or as a philanthropist, as a man of thought or as a man of feeling. His was what Abercrombie would call a well-regulated mind. He was indeed a true man, true to his convictions, and his convictions were arrived at by a strictly logical process, without bias or prejudice. His heart would never swerve from the polestar of principles which his judgement gave him. He was a man of the deepest sympathies, which were not human only, but universal. And indeed it was the strength of this sympathy which, humanly speaking, ushered him into another world. "To be near his wife's tomb at Avignon, he purchased a house and grounds beside the cemetery, in a situation far from healthy, and rendered damp and gloomy by the dense trees which he refused to cut down lest the nightingales might quit the spot." Erysipelas, which is endemic at Avignon, seized him and carried him off in four days. We take from the *Lancet* (May 24) the following notes of his symptoms by Dr. Gurney of Nice who attended him in his last moments:—

"Chest-signs normal, but respiratory murmur very feeble, and some dulness over the lower portion of right lung. Chest generally narrow and contracted. The face, throat, neck, as regards their front aspect, covered with an erysipelatous eruption of a rose colour, intensely swollen on the right ride, slightly so on the left, and here and there covered with patches of vesication, which soon after burst and discharged freely a clear serous fluid. With some difficulty I obtained a view of the palate, uvula, and tonsils, and found them much swollen, and with sore patches on both sides near the glands. The right upper eyelid was also denuded of the cuticle in parts, and discharging a watery fluid. The scalp was unaffected. I was told he had been slightly wandering, but on my arrival I found him to be perfectly collected, but restless. Considering his age and feeble state of health for some time past, the character and very extensive spread of the erysipelatous inflammation, and also that on the low-lying clay soil round Avignon erysipelas is endemic and very fatal, I formed the most unfavorable opinion of the case, and conveyed this impression, in of course appropriate terms, to his daughter and to himself. He received the information with calmness and resignation. I gave him two grains of quinine in solution every hour and a half with three drops of tincture of aconite, and twenty of chloric ether added to the first two or three doses of quinine ; subsequently he had the quinine alone in somewhat larger doses every hour ; strong beef-tea at frequent intervals, and tea to relieve his thirst. I could not get him to take either wine or brandy. About 2 P. M. he rallied decidedly. The pulse was less frequent and firmer, and the swelling appeared less tense on the right side, but still travelled slowly downwards over the left chest, till two-thirds of the whole was occupied by the eruption, the entire right side down to the ensiform cartilage being already affected. He had no pain, except in the throat, especially after swallowing, but felt great distress from the heat and weight of the swelling. As the powdered starch I had applied did not relieve this, I applied a thin, light, hot and moist poultice covered with oil-silk over the whole chest, which he said made him feel much more comfortable. About 4 P. M. his pulse changed for the worse again, and became slightly intermittent, the eruption assumed a bluish appearance on the right side of the chest, and some angry spots appeared over his right instep. The right upper eyelid became rather less swollen, and he told me he could again see with that eye, but the lid exhibited decided sores, from which flowed a considerable watery secretion of a limpid character. No purulent fluid seemed to be secreted throughout the whole case. The great swelling prevented my again examining the throat, but from the fact that he had from time to time, after exertion especially, a thin watery rale, which subsided after a few seconds, I concluded that some serous fluid found its way within the glottis. The respiratory murmur now became less audible, the heart's action weaker, the pulse more intermittent, yet he himself thought he was better, and asked to be read to by his daughter. About 7 A. M. a sudden attack of difficulty of breathing came on, and he died in a few minutes of apnœa, which probably saved him some hours' further struggle against the poisonous influence at work in his system, and death from asthenia."

THE CALCUTTA MEDICAL COLLEGE.

III.

It would have been impossible at this distance of time to find out the names of the "four intelligent and respectable pupils" of Mr. Bramley, the "few courageous pupils" of Dr. H. H. Goodeve, had it not been for the fact that two of these four are still adorning the profession to which they were initiated upwards of a third of a century ago. These are no other than Babu Uma Charan Sett, who has just retired from an honorable service of thirty-four years, and Babu Dwarka Nath Gupta, who has been practising as a private practitioner, ever since he graduated. Even their memory has failed to give us the name of one of their comrades. They, however, all agree in stating that Babu Raj Kisto Dey was the individual who was the first to plunge the scalpel into the dead human body, and to whom therefore the meed of being the pioneer of dissection in Bengal is due. Pandit Madusudan, having been an assistant tutor, was, as a matter of course, present on the occasion, but he did not actually take any part in the dissection. We have dwelt upon this topic, not certainly from any motive to rob the late venerable Pandit of an iota of his fame, but simply from an anxiety to recover the truth in respect of such an important event. It would have been a serious dereliction of our duty as journalists, it would have been winking at the falsification of history, though it was unwittingly done, if we had suppressed the facts as they came up in the course of our researches, merely out of respect to the memory o the parties concerned, parties who are unfortunately no longer in the land of the living. To a careless reader, to one who is loth to disturb things done, because they have been done, to one who is too idle to sail back to the past to see if the traditions that have come down had a real origin,—to such the attempt we have made of giving the facts regarding the first dissection of the human body, might appear nothing but ungenerous, and it was not without mustering some courage that we did make the attempt. But we have thereby neither compromised the late warm-hearted philanthropist, Mr. Bethune, nor dethroned the late Pandit Madusudan from the pedestal of his fame. Mr. Bethune having acted in good faith, his philanthropy remains untarnished, if indeed, it does not shine all the brighter for that. As for the Pandit, he, we have great pleasure in adding, deserves much higher praise, and has a higher claim on our gratitude, than that of being the pioneer of mere dissection in this country. He was well acquainted with our ancient medical writings, and it was partly his assurance to Drs. Bramley and Goodeve of dissection of the human body not being repugnant to our śastras which put an end to their hesitation as to the advisability of introducing it at so early a stage of the institution. As the link between the past and the present of Medical Science in this country, the Pandit stands alone and deserves to be for ever remembered.

There is another point to be settled in reference to the first dissection in the Calcutta Medical College, and that is the date at which it was accomplished. In turning over available records bearing upon, or having any allusion to the point, we notice a good deal of discrepancy about it. According to Mr. Bethune, "the 10th day of January, 1836, was the great day." Mr. Bethune gives no authority, neither have we been able to stumble upon any, for the date assigned by him. Dr. Harrison simply follows Mr. Bethune, and is, in turn, followed by Dr. McLeod. It is not possible to make out the precise date from Dr. H. H. Goodeve's Introductory lecture of 1848. The narration of the early events is too loose to furnish anything precise in reference to the date in question. For instance, he says with reference to the first formation of the College, "an admirable class of intelligent and well educated students was soon formed, and our labors began on the 20th February 1835." Again with reference to the first regular course of anatomy and the removal of the College he says, "it was not however until the Institution was removed to its present site (an event which occurred about six months after our first appointment) that a regular course of anatomical lectures was delivered, and an opportunity was afforded me to place an entire subject on the lecture table before the assembled class." Now the preliminary examination for the selection of students on the foundation was held at the house of Mr. J. C. C. Sutherland, Secretary to the Committee of Public Instruction, on the 1st May, and therefore no tutorial labors could commence on the 20th February. As we shall see, the College was opened on the 1st June. We are inclined to think that what Dr. Goodeve here means by the "date of *our* appointment" is probably the date of the first opening of the College. The date of "our" appointment was certainly not one date. Mr. Bramley was appointed on the 28th January, and Dr. Goodeve on the 11th February. The 20th February might be the date of arrival of Dr. Goodeve at Calcutta, for at the time of his appointment he was at Midnapore.

The only official allusion to early dissection is in the Report of the College for 1838-39. Therein occurs the following statement:—"In 1835, Dr. O'Shaughnessy was appointed Professor of Chemistry. In May of that year, the establishment was located in the present buildings, *and in December of the same year, under the personal direction of Dr. Goodeve, Dissections were regularly and systematically introduced.*" Now there is one statement in this passage which we can prove by abundant testimony to be absolutely erroneous. The establishment was *not* located in the present buildings in May 1835. The College, in fact, was formally opened on June 1st 1835 in an old building in rear of the Hindu College. It was there and at that date that the inaugural lecture was delivered by Mr. Bramley. And the College remained in that building for some months, how many, we have not been able to *exactly* ascertain from any record, but we are assured by some of the foundation students whom we could meet, that the time could not have been less than six months. We find allusion to this in the inaugural lecture of Mr. Bramley:—

> At present he begged his pupils to understand, that the general and enlarged course of professional instructions, which it was intended to adopt, in this seminary, could not be regularly commenced on till numerous arrangements, with regard to the erection of suitable buildings and the necessary appliances for teaching shall have been completed. These, however, he was happy to inform them, were in progress, and he trusted, in the course of a few months, they would find themselves fairly and comfortably established in an institution, which would do no discredit to the age in which they lived or the munificent government which had endowed it, he would then have the pleasure of seeing around him, a much larger number of pupils than was there assembled in this infant stage of the College.

Allusion to this first location of the College was made in a letter of "An Impartial Observer" to the Editor of the *India*

Journal of Medical Science, dated the 9th July 1835 and published in the August No. of the *Journal.* In this letter, the correspondent says—" As to the necessity of more professors, I of course agree with you; and I believe that perhaps more professors will be appointed so soon as the College is removed to its destined place." The error in the official statement, regarding the date of removal of the College, throws doubt upon the accuracy of the statement regarding the date of the commencement of dissection. But though the actual chronology of the two events are found to be erroneous, there is one fact which stands out from the official, and from Dr. Goodeve's, account in question, and that is the chronological *order* of the events. In other words, it is certain that dissections were not commenced till after removal of the College to its present buildings.

There can be no doubt, however, that the second session of the College was opened by the Principal in the building where it was destined to be located. For, the *Friend of India* of the 24th March 1836, in noticing this opening of the College on the 17th March, has the following:—

> " At the close of this eloquent address (of Principal Bramley), which was received with loud plaudits, Lord Auckland walked round the table and cordially shook the Principal by the hand ; and intimated the deep interest which he felt in the welfare of this noble Institution. *His Lordship then proceeded to inspect the building, the library, the anatomical figures, the chemical laboratory, &c.,* and expressed himself highly pleased with them."

The " building" here alluded to is evidently the new building of the College, and the " library" and the " chemical laboratory" could only be in this building. His Lordship would not certainly think it worth his while to inspect the old wretched building in rear of the Hindu College, where the Institution was originally located. Again, the Editor of the *India Journal of Medical Science,* in noticing the same opening lecture thus notices the theatre in which the lecture was delivered:—" The lecture room is nearly an amphitheatre, and well-proportioned; the adjoining rooms, &c., are also admirably arranged and creditable to the judgment of Mr. Bramley and his colleagues." The " amphitheatre" must have been in the new building. Such an amphitheatre certainly did not exist in the old house where the College was temporarily located. From both these extracts there can be no doubt that the second inaugural lecture of Mr. Bramley was delivered, and therefore the second session of the College was opened, at its own local habitation. The date of this opening was the 17th March 1836. How long precisely the College was removed here previous to this date, we have not been able to assertain from any recorded testimony; but we have been told by some of the foundation students still living that it could not have been longer than a month.

Under no circumstances, then, could dissections have been begun so early as December 1835, as stated in the Report of the College for 1838-39, nor even in January 1836 as stated and fixed by Mr. Bethune. We again turn to Mr. Bramley's First Report for accuracy in the matter. We give the following extracts bearing upon the point:—

> "The College having closed during the holidays, re-opened on the 15th October 1835, when a more extended course of lectures on Anatomy was commenced which continued till the 31st March 1836. * * * Bones, plates, and models, again formed the chief material for illustrating this course, but occasionally portions of animals lately dead, and in a few instances parts of the fresh viscera of the human subject were introduced for demonstration."
>
> "The summer session from April to September having been occupied by lectures on chemistry and the practice of physic, the second regular anatomical course did not commence till October 1836. * * * Up to this period *actual dissection*, which was destined to be the chief feature of this course, had *not* been practised by the class. *If* it had been desirable, *no conveniences were in readiness* for the purpose during the *previous* cold season, which is the only time such operations can be practised in this country. But under any circumstances, it would not have been advisable to put the dissecting knife into the hands of the students until they had acquired some familiarity with the nature and situation of the parts they were about to examine, nor until their moral training had been so ripened as to admit of the final, yet all important, experiment being essayed, without risking the interests of the Institution."
>
> * * * * * "And I have the gratification to say that on the 28th October, all doubt was removed. On that day," &c.

This testimony is decided and direct, and if corroboration were necessary, we have it in contemporaneous testimony. The *Friend of India* of the 20th October 1836 in noticing the Calcutta Medical College has the following:—"The Winter Session of the Medical College commenced even before these ceremonies (of distribution of prizes on the 13th instant by

Lord Auckland) of that which preceded it were concluded; and, although much has been already accomplished, not only in chemistry but in anatomy and its kindred subjects, yet it is now that the serious, professional business of the College is to be only grappled with. Dr. O'shaughnessy's next course is to be one of *Materia Medica and Pharmacy;* and the concomitant courses of *Anatomy, Physiology and Surgery* by Dr. Bramley and Dr. Goodeve, *are to be accompanied with the actual use of the knife by the pupils themselves.*"

(To be Continued.)

CLINICAL RECORD.

A Case of Hysteria. Recovery.

UNDER CARE OF DR. M. L. SIRCAR.

Babu R. D. M. placed his wife (then aged 31 and mother of seven children, the age of the eldest 18½, of the youngest 3½) under my treatment in May 1870. Her symptoms were: Hysteric fits every day in the afternoon or towards evening. The fits were characterised by loss of consciousness, violent convulsions, and involuntary loud cries alternating with loud laughter. The duration of the fits varied, being sometimes as short as five minutes, sometimes as long as half an hour; generally they used to last from twenty to thirty minutes. Just before the fits she would complain of her jaws being compressed with great force, which caused inability to open her mouth; this lock-jaw continued throughout the fit, except when involuntarily opened by cries and laughter. She also felt as if something were moving below her throat, and as if a millstone were pressing against her chest. She also fancied that she saw figures of demons with numerous heads and large teeth, who seemed to converse with her. When not in the fits, the following symptoms were continually present:—giddiness; rumbling in the bowels; incarceration of flatulence, escaping neither upwards nor downwards, and causing her much uneasiness; shuddering and shivering at times of bathing, though she could endure every possible amount of cold; in fact she was obliged to keep constantly a towel dipped in iced water over the head to allay the burning there; dulness and perversion of the senses generally, she would see figures, hear sounds, smell odors, alternately agreeable and disagreeable, without any objective reality; gloomy countenance; eyes swollen and fixed to the ground, as if wrapt in contemplation; forgetfulness; and fearfulness, fearing chiefly ghosts and demons, which she would request her relatives to have exorcised. Her bowels were very costive, her stools being always scanty. The menses were very scanty.

The disease in this form had first declared itself in Dec. 1869. Previous to this she had been suffering from dyspepsia for sixteen years. This arose immediately after the death of her second child. The chief symptoms of this dyspepsia were—acidity, burning of the crown of the head, of the eyes, chest, hands and feet, with tightness of the chest. She could not derive relief from these troublesome and painful symptoms, excepting from vomiting of a large quantity of acid stuff from the stomach. For a year previous to her present complaints, the dyspeptic symptoms had become very severe. Every morning she had very copious vomiting, after which she used to become so weak and languid as to feel her own body was not her own. The menstrual function had been irregular since 1864, previous to which for four years it was suppressed. A few days previous to the bursting out of the hysteria the daily vomiting stopped of itself and could not be induced even by voluntary efforts. This circumstance, with the privation she had to undergo on the occasion of her son's wedding, was probably the immediate exciting cause of the complaint for which she came under my treatment.

The disease at first was mild in character, the fits being much less severe and few and far between. There were acidity, burning of the whole body, especially of the crown of the head, loss of appetite, costiveness, with scanty stools, shivering at times of bathing, melancholia and forgetfulness. She was placed under Kaviraj treatment, under which she was kept for three months. Inunction of various oils, and numberless internal remedies were prescribed, but without the slightest improvement. She was therefore placed under what is called English treatment (allopathic) and in the course of a month her disease became so much aggravated, that even the doctor pronounced the case to be incurable, and could think of no better treatment than the application of the seton to the nape of the neck, and removal to a better climate. This alarmed the husband and compelled him to think of homœopathy.

The following is a summarised account of the treatment I pursued :—

I began her treatment on the 7th May 1870. Gave *Aco.* 30. This had at once the remarkable effect of quieting and soothing her considerably, and though the fits were not altogether checked, their intensity and duration were much lessened. On stopping it on the 9th she became slightly worse again. Gave it again on the 10th with the same effect as before.

13th *May*. Fits, though less in intensity and duration, still were occurring every day. Gave *Puls.* 6. This was continued till the 2nd June, with occasional intermissions. The fits had now become less frequent, coming on at intervals of 5, 6, or even 8 days.

3rd to *6th June*. *Nux v.* 30 for costiveness and acidity, which were relieved.

8th to *24th*. No medicine.

25th. Had been complaining since the 21st of heaviness in the stomach, heat in the head and acrid sensation in the throat. *Puls.* 30, which was continued till the 20*th July*.

21*st July*. Great disposition to weep. Loathing of life. Thoughts of committing suicide. *Am. c.* 6.

24th. Better. Cont. *Am. c.*

28th. Shivering again at time of bathing and also towards evening, since the 25th. Fits had not disappeared yet; they came on, though at long intervals. Alternate weepings and laughter. Thoughts of committing suicide stronger. *Aur.* 6.

31*st*. Better. Cont. *Aur.*

3*rd Aug*. Course had commenced since yesterday. No med.

16*th*. Somewhat bad again, with thoughts of suicide. *Aur.* 6.

19*th*. No better, *Aur.* 30.

20*th* to 31*st*. Again talking of demons and evil spirits and also much of other meaningless things. No fits for a long time, but flushes of heat towards afternoon in place of the fits. *Puls.* 30, which was continued till the 31*st* with the most beneficial results.

1*st* to 23*rd*. No medicine.

24*th*. One dose of *Puls.* 30 for the return of some of her complaints, such as, heat in the head, heaviness in the chest, loss of appetite, internal shivering, sensation as if some thing warm were rising from the stomach to the head. She was all right till the 30th Oct. when she complained of extreme debility; pain in the head, waist and joints; great burning of the skin throughout. *Ars.* 30.

6*th Nov*. The menses, which should have appeared two or three days ago, had not yet appeared, on account of which she was uneasy again, the burning sensation in the stomach, nausea, fear of demons at night, &c., having returned. *Puls.* 30, one dose.

All right till the 14th Jan. 1871, when she was slightly bad again. One dose of *Puls.* 30 and she was relieved.

On the 15th Feb. I had to give her a dose of *Puls.* 30 for similar complaints with the same result.

16*th Sep.* 1871. All right till two or three days ago, since which she was complaining of temporal headache, a sensation of a lump in the throat, causing nausea and a desire to vomit, burning of the skin, flat taste in the mouth, achings and tinglings in the tips of the fingers, aversion to work, palpitations, fearfulness, evil spirits speaking to her. *Cupr.* 6.

All right till the 12th Nov. when she got fever which was very foolishly attempted to be cured allopathically. Enemas of castor oil, belladonna plasters to the temples, &c., were had recourse to with the only effect of aggravating the disease. Under our treatment the fever rapidly yielded to *Ars.* and *Puls.* and she has been all right since.

चरकसंहिता ।

सूत्रस्थानम् ।

षष्ठोऽध्यायः ।

व्यक्ताम्ललवणस्नेहं वातवर्षाकुलेऽहनि ।
विशेषशीते भोक्तव्यं वर्षास्वनिलशान्तये ॥ २९ ॥

अग्निं संरक्षणवता यवगोधूमशालयः ।
पुराणा जाङ्गलैर्मांसैर्भोज्या यूषैश्च संस्कृतैः ॥ ३० ॥

पिबेत् क्षौद्रान्वितञ्चाल्पं माध्वीकारिष्टमम्बुवा ।
माहेन्द्रं तप्तशीतं वा कौपं सारसमेव वा ॥ ३१ ॥

CHARAKA SANHITA.

CHAPTER 6. *(Concluded.)*

29. In varshá whenever the day is windy and rainy and particularly when cold, food with excess of acid, salt, and oil, should be taken to check excess of wind.

30. To preserve the digestive fire, people should use old barley, wheat, and haimantic (cold season) rice, and meat of wild animals, and spiced soup (vegetable).

31. And should drink in small quantities mádhvika spirit (the spirit distilled from the blossoms of the bassia latifolia) sweetened with honey. And should drink rain water, or water from wells and tanks, cooled after having been previously boiled.

प्रघर्षोद्वर्त्तनस्नानगन्धमाल्यपरो भवेत् ।
लघुशुद्धाम्बरः स्थानं भजेदक्लेदि वार्षिकम् ॥ ३२ ॥

वर्षाशीतोचिताङ्गानां सहसैवार्करश्मिभिः ।
तप्तानामाचितं पित्तं प्रायः शरदि कुप्यति ॥ ३३ ॥

तत्रान्नपानं मधुरं लघु शीतं सतिक्तकम् ।
पित्तप्रशमनं सेव्यं मात्रया सुप्रकाङ्क्षितैः ॥ ३४ ॥

लावान् कपिञ्जलानेणानुरभ्रान् शरभान् शशान् ।
शालीन् सयवगोधूमान् सेव्यानाहुर्घनात्यये ॥ ३५ ॥

तिक्तस्य सर्पिषः पानं विरेको रक्तमोक्षणम् ।
धाराधरात्यये कार्य्यमातपस्य च वर्ज्जनम् ॥ ३६ ॥

32. In varshá people should have their bodies well-rubbed, and especially rubbed upwards; should bathe; should use perfumes and wear garlands of flowers; should use light but clean clothing; and should live in places free from damp.

33. In śarat the bile, which has been accumulating in varsha from alternate cooling of the body (by wind, rain, &c) and heating of the same from sudden exposure to the rays of the sun, become excessive.

34. In that season (śarat), bile-destroying food, i. e. food and drink which are sweet, light, cold, and bitter, should be taken in moderate quantities, and in good appetite.

35, In this season the following are declared as edible, láva (Perdix chinensis, a sort of quail) kapinjala, ena, urabhra (sheep), sarabha, hare, haimantic rice, barley, wheat.

36. In this season bitter ghee should be used, purgatives and bleeding should be had recourse to, but the sun should be avoided.

वसां तैलमवश्यायमौदकानूपमामिषम् ।
क्षारं दधि दिवास्वप्नं प्राग्वातञ्चात्र वर्जयेत् ॥ ३७ ॥

दिवा सूर्य्यांशुसन्तप्तं निशि चन्द्रांशुशीतलम् ।
कालेन पक्वं निर्दोषमगस्त्येनाविषीकृतम् ॥ ३८ ॥

हंसोदकमिति ख्यातं शारदं विमलं शुचि ।
स्नानपानावगाहेषु शस्यते तद्यथामृतम् ॥ ३९ ॥

शारदानि च माल्यानि वासांसि विमलानि च ।
शरत्काले प्रशस्यन्ते प्रदोषे चेन्दुरश्मयः ॥ ४० ॥

इत्युक्तमृतुसात्म्यं यच्चेष्टाहारव्यपाश्रयम् ।
उपशेते यदौचित्यादोकसात्म्यं तदुच्यते ॥ ४।

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37. And also fats and oils, the flesh of aquatic and amphibious animals, alkalis, curd, sleep in the day time, and the east wind should be avoided.

38 & 39. The water of śarat being warmed by the sun in in the day time, cooled at night by the moon, matured (settled) by time, depurated of all poisonous qualities by Agstya (the star Canopus), is free from all injurious qualities, famed as hansodaka, pure, fit for sacred purposes, and when used for bathing and drinking is conducive to health like amṛita itself.

40. In śarat the use of garlands of flowers, of clean dress, and exposure at night fall to the rays of the moon are conducive to health.

41. Thus have been described all hygeinic measures, dietetic and other, which are *ṛitusátmya* (wholesome according to the seasons.) Those which are wholesome from habit are called *okasátmya*.

देशानामामयानाञ्च विपरीतगुणं गुणैः ।
सात्म्यमिच्छन्ति सात्म्यज्ञाश्चेष्टितं चाद्यमेव च ॥ ४२ ॥

। तत्र श्लोकः ।

ऋतावृतौ नृभिः सेव्यमसेव्यं यच्च किञ्चन ।
तस्याशितीये निर्दिष्टं हेतुमत्सात्म्यमेव च ॥ ४३ ॥

इति तस्याशितीयाध्यायः समाप्तः ॥

42. Whatever hygeinic measures counteract the morbific influences peculiar to localities and particuliar diseases are recognized by the *sátmajna* (hygeist) as *sátmya* (wholesome).

Summary.

43. We have in this chapter treated of whatever is to be adopted and whatever is to be avoided according to the seasons and other circumstances.

Gleanings from Contemporary Literature.

HOW TO TREAT PREVAILING DISEASES.

A Historical Review. By C. Hering, M. D.

(Concluded from page 392, Vol. V.)

1841, RADEMACHER.

In the same year, of which we gave a sample of allopathic nonsense in a former number of this JOURNAL, there appeared a very voluminous and very odd book, which was much talked of at that fruitless period, which doubted every thing. It came out under the title :

"Justification of the Therapia of Experience of the old alchemists, so frequently misunderstood by the Scientific World, and a true Report of a Practice of Twenty-five years, which proved the Correctness of that Doctrine at the Sick-bed." By Johann Gottfried Rademacher. (Rechtfertigung der von den Gelehrten misskannten verstandersrechten Erfahrungsheillehre der alten scheidekunstigen Geheimärzte, und treue Mittheilung des Ergebnisses einer 25 jährigen, Erprobung dieser Lehre am Krankenbette, von Johann Gottfried Rademacher.) It was a volume of 1,500 pages and passed through four editions in ten years.

The author was an old, experienced, well-read, scientific, benevolent and truthful physician.

Six years after the appearance of the *Organon,* which at any rate he had perused, although he never mentions it, accidentally the Strasburg folio edition of the writings of Paracelsus fell into his hands. Whereas the *Organon* by the so-called small doses, which he mentions in a foot-note of his book, I., p. 103, failed to urge him on to experiments, the teachings of Paracelsus, misjudged as they were for centuries, carried him onward to further trials, and he worked himself into a most curious fiction, such a one as has not its equal in the whole history of medicine.

This Strasburg folio edition of the works of Paracelsus appeared in 1616, therefore 75 years after the death of Hohenheim. According to the critical examination of Prof. Marx of Goettingen, a scholar, whose history of Toxicology will be his greatest monument, hardly one-seventh of these writings are genuine, two-sevenths disfigured by additions, and four-sevenths entirely spurious. We may add that the most important works of Hohenheim, the surgical ones, particularly such as were already printed during his life and under his own supervision, were only known to Rademacher through the Latin translation, according to Marx a much mutilated edition ; no German could receive a just impression of the clear, open, scientific and carefully observing method in which Hohenheim excelled ; a man who gave surgery its patent of nobility, as indispensable to the true physician ; a man who was the first to urge the study of midwifery and its application in cases of need ; a man who was the first physician that embraced the medical science in its totality ; a man who had the courage to preach independence from the statutes of the old scribes of foreign countries ; a man who was the first to insist on observations and experiments, and to hold firmly what was found good ; a man who taught medical science in the vernacular of his own country.

Rademacher, who considered the spurious writings of Paracelsus also genuine, was astounded by the eminence of the man and of his doctrines ; all the prejudices against Paracelsus, which he harbored through the ruling opinion of the majority, vanished; but, trying to harmonize the false doctrines of the surreptitious writings with the genuine, he fell into errors of great importance.

He imagined that there was a society of secret physicians at that time, and that Hohenheim was one of them. He then thought to discover the secret remedies of these societies, and being sure of his discovery, the fantastic book followed. Though there might have been secret physicians, they never formed a society, and Hohenheim never belonged to them, for his whole manner was opposed to it.

Hohenheim continually looked on the common people with intense sorrow. He wished to suppress all impositions, by which the people suffered so much; and to show the way by which medical science might fulfil the promises which it held out to the world.

In his first work, printed during his life, 1530, "Of the French Disease and the Impostures of Doctors," he discarded the alchemists, the chemical school, as one-sided, and in so far as that class wished to keep secrets, he forsook them entirely. But their whole secrecy consisted only in their attempts at making gold, and it has never been shown that one of them kept anything secret in relation to curative measures. Necessity forced them to keep secret philosophere's stone, as they for ever failed to give it existence.

At every period queer persons will exist, who consider their own miserable entity of more value than the welfare of the world. But just this universal welfare was it, which filled the whole soul of Hohenheim. If Rademacher considers Hohenheim capable of keeping such secrets, he entirely mistakes at the very beginning his whole character. Excusing Hohenheim by the period, which also approved of a great many other disgraceful things, he failed to see how far superior Hohenheim was to his period.

The only quotation which Rademacher adduces to show that Hohenheim considered secrecy necessary, demands a different explanation if taken *in toto.* When Hohenheim uses the words secrets, mysteries, arcana, etc., he finds them at that period as the usual expressions for all the new observations and experiments. With us the meaning of these words is entirely different from what it then was.

After Hohehneim had already at an earlier date proposed the axiom which Hahnemann discovered again in the same manner, by close observation: that no plague is alike (I., 152, Strasburg, 1616), he says in his little book on pestilence, written for the city of Sterzingen: "Blessed is the pledge which absolves its master, kept no arcana secret, and considers that to-day may take care of its duties, and to-morrow will find enough to do to redeem its pledges (I., 356, Strasburg, 1616).

Thus we clearly prove the error of Rademacher. It seems queer, that after such a whole crew of calumniators as Hohenheim had, who were not ashamed to boast of their malignity and spiteful injustice, there could be found one genial mind daring to defend Hohenheim; and he did it in a clear and telling manner. Only imagining to have discovered all secrets, he considers Hohenheim guilty of keeping secrets, and mistakes, therefore, in an essential manner, not only the character, of the man, but also his doctrines, especially his views about astralic diseases (genius epidemicus). He does not know even the decisive quotation just mentioned. But he thoroughly knows his Sydenham, and judges him according to his merits; he accepts also from him the truth as the leading ground idea; even Hahnemann's views are touched, as far as it suits him, perhaps unconsciously, as he never mentions the *Organon.*

Thus Rademacher built with great labor a doctrine, which in monstrosity has not its equal, having no similarity whatever either to Hohenheim, or still less to Hahnemann. But in spite of all his preposterousness Rademacher became one of the most important instruments in the further development of medical science, on account of his purity and sincerity; in the latter he is similar to Hohenheim and Hahnemann.

He did a great deal directly as well as indirectly. Nearly simultaneously with Marx, he labored in his way, so that many physicians became ashamed of the foolish and maligant injustice with which Hohenheim had been assailed.

By his doctrine, which controverted the old and new nonsense of former schools, he has done more, though in an indirect manner, for the furtherance of the Hahnemannian school than any other before him. He shook the old tree, so that the best fruits separated from it, but what was of real value fell in our lap.

The kernel of Rademacher's doctrine is:

1. There are those primeval affections, diseases of the whole body in its totality (Ur-Affectionen, Gesamtkrankheiten); all the rest are organic affections.
2. For the first class there are three universal remedies: *Ferrum, Cuprum,* and *Natrum nitricum* (the cubic saltpetre).
3. All other remedies are organ remedies for all other affections.
4. Only experiments on sick persons can teach us on which organ a remedy possesses a curative influence.
5. When epidemics are about, we look for remedies, first among the universal remedies and then among the organ remedies; we experiment with all of them in their turn, and the right one will then cure every case.
6. In relation to the dose, everything remains *in statu quo,* the more the better, but with the precaution, valuable also in fattening animals, never to give more than they can well bear.

We must make a note to the cubic saltpetre, the *Natrum nitricum.* Rademacher found, by mere accident, that it is an exceedingly valuable remedy; he gave it in the place of the usual saltpetre, *Kali nitricum,* to a weakly patient, "because all Natrum salts act more mildly." This induced him to consider it as one of the universal remedies of the secret physicians, the remedy for the primordial affections of the organismus. This, at any rate, is not a fair conclusion. He quotes Paracelsus and entirely forgets that he accused him of keeping things secret, quotes him who tells how it must be prepared, as he considered it a chief remedy in diarrhœa. But the question is found among the Archidoxæ, a surreptitious patchwork of a later period.

Johann Bohan, 1646-1708, is the first one who mentions the cubic saltpetre, a hundred years after Paracelsus. The Englishman, *R. Boyle,* also speaks later (1627-1691) of its preparation. *Stahl,* 1723, leads the attention of physicians to it. The chemists now learned by its discovery to distinguish between soda and potassa. *Vide* Kopp's *Geschichte der Chemie,* 4, 40.

The following is a short review of Rademacher's doctrine on intermittent fevers and how to cure them. Notes are given in parentheses:

Vol. I., p. 196. The only substance (in all the three kingdoms of creation, whereof we know about $\frac{1}{10\cdot000}$) which I consider to be a skin remedy, is the Peruvian bark, because its curative power in intermittent fever cannot be disputed any longer. (This curative power has been disputed over and over, except in some cases of malarious fever, because it killed more persons than it ever cured. And as Sulphate of Chininum, one of the strongest mineral acids, deserves also some consideration.) Intermittent fever, I consider a primordial disease of the skin (especially of the finger nails, as they turn blue).

Rademacher reasons thus: The inermittent fever does not yield to any of his three universal remedies, and cannot, therefore, be a primordial affection of the whole organism. (The quack says the same; if his remedies against scrofula fail to cure the patient, he says he has no scrofula) intermittent fever mixes itself easily with the morbus stationarius.

p. 797. If the latter falls under the curative power of Iron, Copper, or Natrum nitricum, then the intermittents will be at first treated in vain with the Peruvian bark; the right universal remedy must be given; it also will not eradicate the intermittent fever, but now the bark will be successfully given for the relapses.

p. 798. That the bark suppresses an intermittent is nowadays an acknowledged truth. (Suppression is not a cure.)

p. 809. The intermissions are only of secondary importance (exactly what Hahnemann also teaches and his disciples also observed).

p. 812. Where in the whole human body is there an organ which could be compared with the skin in its irritability? I do not know of any other. (No pathologist has yet found it worth while to notice this idea, it lies like a dead fish on the beach.)

p. 817. I observe that I do best by forgetting the intermittens, and trying to restore health in the primordially diseased organ. (He ought to have forgotten in all cases the name of the disease, and direct his whole attention to the symptoms; the primordially diseased organ would then have been more frequently cured, without going in search of it among the host of known and unknown remedies.)

II. *p.* 209. What injury could we do with an ounce of Ferrum aceticum? Iron is no hostile remedy! (but all inhabitants of palaces where they are obliged to drink ferruginous water are sick).

p. 345. The poisonous qualities of Copper belong only to old fables. (Because those secret and universal remedies, apparently discovered by him, do not act so severely or so destructively on man as quicksilver or lead, he considers them not hostile! *i. e.* harmless and frequently beneficial.)

Rademacher finally broaches the idea of Hahnemann without giving him credit.

p. 346. "In order to find out if the internal use of Copper would produce sickness in a healthy person or not, I (Rademacher) considered it best and most convincing to experiment on my own person." He swallowed Black Oxide of Copper (which could only act as an indifferent foreign body), not pure, but mixed with the extract of the mistletoe, every morning 15 grains for eight days; then for three weeks daily four grains; after a while, for eight months daily 4 grains; and did not observe anything but painless diarrhœa, which did not last long (if he had chemically examined the stools, he would have again found all the Copper he swallowed), also uncommon hunger during the forenoon. (And such a swallowing he calls an experiment! and concludes that what did not disturb *him*, would never molest anybody else! Every tyro knows that all remedies act differently on different persons or provers, and in some persons many remedies never produce any symptoms).

There is only so much truth in it, that both these metals are not so apt to form combinations with organic parts as many other metals. From an ulcerated bone, which had been treated twenty years before with an ointment containing copper, that metal was discharged under homœopathic treatment. It is well known that if vegetable acids are taken after Ferrum or Cuprum, severe symptoms follow. It is strictly forbidden at Pyrmont to use berries or fruits during the cure. Decided intoxication have been observed in patients treated according to the doctrine of Rademacher, when they partook of the decoction of dried prunes after taking the copper.

(Hasselt.) In every case where the metals do not combine with an acid, they pass through and can be found in the fæces, iron as well as copper. All toxicologists, even our recent and most careful writers, acknowledge a poisoning by iron and a poisoning by copper.

We close our journey through this large labyrinth, which contains many valuable records of recoveries; but its doctrines cannot be compared with those of Hahnemann. Homœopathicians also are apt to make mistakes in the choice of the remedy, but the more strictly they examine every case, closely adhering to the precepts of Hahnemann, the more cases are put together by summing up the symptoms, the more certainty they gain, and the more frequently cures will follow. We can seek, and will have the promise to find. With Rademacher, it is simple guesswork; he gropes for the universal remedy for the morbus stationarius; he gropes for the organ-remedy in every epidemic, and good luck alone may permit him to hit the mark.

The remark of Rademacher: one could become a master in such guesswork by throwing overboard all theories and mysticisms! is against all common sense. It necessarily will always be a game of chance. Rademacher's unjust prejudice leads him to the foolish remark, that "provings on the healthy lead to nothing, because we can only perceive in the patient what external causes produced the disease." Now, this is the very thing by which the provings become so instructive, teaching us the strictly curative indications of every remedy, without relying on chance, and without trying criminal experiments on the patient.

We finally add the following conclusions, which can be proven:

1. There are no universal remedies, and it is impossible that there should be any.

2. There are no organ-remedies, and it is impossible that there should be any. All remedies, so far proved, show that their sphere of action has a lesser or greater limit. Where our provings are still limited, it may appear in some cases as if its action points more to one organ than to others. *Secale* is given as a sample, but Secale has never been proved; and, the very uncertain symptoms of raphania excepted, we know very little about it. It is considered a uterine remedy, because it acts on the pregnant uterus and expels the fœtus, but in persons poisoned by it the fingers and toes fell off, even in persons who have no uterus.

A miserable experiment was made in England during the year 1867, a full quarter of a century after Rademacher, to teach the very same doctrine under the name "Organopathy," and its author even tried to put it in the place of Homœopathy. Such a miserable humbug deserved to be shown up in its nakedness (see The last events of 1867, Phila. Boericke), even if collegial etiquette may be sorely wounded by it. But who could stand it, to see Hahnemann himself attacked, and queer and foolish doctrines set up to take the place of pure Homœopathy? In such cases all our collegial feeling vanishes, for we do not consider such a person a physician, and still less a colleague. To offer us the old story as a new discovery was a piece of impudence; sour krout will improve by being warmed up repeatedly, provided some lard is added each time; but mushrooms become indigestible and loathsome.

1860, GRAUVOGL.

1860. Appeared "Die Grundgesetze der Physiologie und Pathologie und Homœopatischer Therapie von Doctor von Grauvogl, Nürnberg bei Kern (Principles of Physiology, Pathology and Homœopathic Therapy, by Doctor von Grauvogl), a work which marks a period in the history of Homœopathy.

1866. The same work appeared in a second edition, increased by about one-third in its contents, and essentially improved under the title "Text-book of Homœopathy in two parts (Lehrbuch der Homœopathic in zwei Theilen).

As this work was translated in a most excellent manner by Dr. Shipman, we may well suppose that every physician enriched his library with it, and we can pass it over with more brevity ; still there are some points which we will try to explain, as they may not be clear enough to some readers.

We know that Hahnemann sharply divided sycosis from syphilis, and for good reasons, which justified him for so doing after many long years of observation. We also know that he separated both from psora and its sequelæ. The nonsense of disparaging this glorious doctrine through the aid of the notorious mite (acarus), which he well knew from Wichmann's "Ætiologie der Kraetze, 1786" (as he was in possession of the book), merely because soon after the appearance of his "Chronic Diseases," a young Corsican in Paris showed others an easy method of picking out the acarus, by which he earned great reputation with Frenchmen—for what could they be expected to know of Wichman ?—this nosense stands on a par with the malicious story, that he had discarded his former doctrine. Suffice it, that he established these three divisions, to the great relief of all his true disciples, and all and each of his doctrines remained exactly the same as they always had been.

We find that Rademacher also divided diseases into three classes. Although he took many things from Hahnemann without ever mentioning him, as, for instance, the tinctures from fresh plants, the Nux vomica, etc., yet this idea, we confess, like many others, came to him accidentally. He believes to have discovered them in the writings of Paracelsus, and even makes him a member of a secret alchemistic society, and does not even know that Paracelsus already, in his first book, 1830, entirely discarded alchemy ; that he has nothing in common with alchemists, as they looked for a universal remedy, the Philospher's stone, with which he felt perfectly disgusted. We find that, in consequence of this wrong view, Rademacher brought out his three universal remedies.

His warm and sagacious defence of Hohenheim won many a young talent for him ; but still more, other parts of his book. *Everything is narrated with enchanting truthfulness, clearness, and open-heartedness, what happened to him in the quarter of a century, during which he was led by his queer notions ;* he is such a good soul, that one forgets the unscientific and inartistic groping.

We have to thank Rademacher that Grauvogl burst the ties which bound him to the old school, and, as he, critical thinker as he was, soon found out how much uncertainty was in that sect, it bridged the way for him to Homœopathy. There are some more well-known names in Homœopathy, we have to thank Rademacher for. Grauvogl discovered that the class of diseases which Rademacher cured with Copper corresponds to the psora of Hahnemann.

Those cured by Iron correspond to a form of sycosis, also to syphilis.

Those cured by *Natrum nitricum* (Grauvogl puts *Natrum sulphuricum* etc., in its place) correspond to another form of sycosis, the leucæmia.

This alone gives to beginners most valuable points of rest.

Grauvogl puts his new doctrine on the above basis, rising above both, refining the doctrine of Hahnemann, and elevating the doctrine of Rademacher to a scientific standpoint. He says :

"There are three principal characters of chronic diseases, or better, bodily constitutions. All chronic diseases are based on a plus or minus of such elements as form the organismus. In the psoric diseases, prevented ingestion of Ozone, a want of it prevails, thus preponderating formations of carbonitrogenous substances : the *carbonitrogenoid constitution.* In the second prevails increased power of oxygenation, far too great influx of oxygen: the *oxygenoid constitution.* In the third the quantum of water is too large, especially in the blood: the *hydrogenoid constitution.*"

We recognize the differences by atmospheric influences, by the success of hydropathic treatment (which is only applicable in the carbonitrogenous constitution), by the good or bad effects of certain food, etc., all of which though belongs to general therapeutics.

As we here only consider the prevailing or epidemic diseases, we will try to apply the above doctrine to that of the genius epidemicus.

It may be accepted as certain that there is a morbus stationarius or genius epidemicus, lasting for years, extending over large countries, perhaps over the whole world, and passing from time to time, according to a law still unknown, from one into another. During the first half of the last century the gastric kinds prevailed, and purgatives were the fashion; after a while the inflammatory prevailed, and venesections and leeches were the order of the day; then the nervous diseases began to prevail, venesection ceased, the copromonia decreased, and nervines came into the foreground.

Between these great periods, known by their stationary character, there are, what Rademacher calls, "intercurrent epidemics," contagious or non-contagious, of shorter duration and extending only over certain districts.

Let us try to transfer Grauvogl's constitutions to the epidemic genius, and let us suppose that after the period where Copper cured everything, a period should follow for the Iron, and then one for Nitrum. Rademacher says that he did not see the saltpetre constitution pass over into the iron constitution. This would give us the series of these periods. The carbonitrogenoid would be followed by the oxygenoid, and this by the hydrogenoid.

At any rate we must closely study our terrain before we can put up anything positive; but we expect great aid from the giant strides which meteorology has made of late and is still continually making. We will only mention that this prevailing epidemic character must be easily recognised by its influence on the different constitutions. If it corresponds to the carbonitrogenoid, persons with such a constitution will fare worst and most easily fall a prey to disease, whereas oxygenoids will feel well, and hydrogenoids only be liable to some changes.

Should this be followed by an entirely opposite period, then the oxygenoid constitution will fare worst, the carbonitrogenoid the best, the hydrogenoid experience certain changes different from the former one.

But if the latter has its turn, the hydrogenoids would suffer most, the oxygenoids the least, and carbonitrogenoids be liable to certain changes.

Every such prevailing epidemic character would, therefore, act on the different constitutions, disturbing, checking, or altering. What Grauvogl adduces against Gross, II., 284, belongs to endemic influences. As we are already able to arrange a great number of our remedies, as Grauvogl, Aegidi, and H. Gross have shown, according to these three divisions it would be a great help if we would be able to select our remedy according to these divisions.

One of our inflated Homœopaths, who has become popular by his "blowing," said once, in his dictatorial style, "I know but one croup, and Jodine is the specificum, give but enough of it." Thus he proved his ignorance, and his total want of observation.

Grauvogl, an observer, thinker, and a genuine practitioner, gives a differential diagnosis of croup, II., 221; for the first, *Cuprum* is indicated; in the second, *Ipecac.*, *Jod.*, or *Brom.;* in the third, *Hepar s. c.* He might have added some other names to every division. Hooping-cough also differs every year, and needs different remedies for its eradication. A close study of the epidemic character will lead us to the right selection, so that we may know it beforehand.

But we must never neglect the most careful examination in every case, according to the rules of Hahnemann; for, as important as is the aid which Granvogl's constitutions bestow upon us, all the above additions remain alone but suppositions. Sure and certain, reliable and curative, are only the rules given by Hahnemann; to examine closely each case, and in prevailing diseases to collect the symptoms of all our patients and to select the remedy accordingly.

If we have done this day after day, we get such a dexterity that we become enabled to do it all the time. We get used to observing the prevailing character of diseases, even if there are no epidemics. By combining all the time the symptoms of many cases, and, if our practice is limited, by comparing our few cases with the observation of colleagues, we may be able to find, particularly upon each change of the weather, that in most cases one or a few drugs are indicated by preference. All the patients with few symptoms not distinctly affected may then be benefited by the same medicine. Already in 1837 and often since, the homœopathic practitioners in Philadelphia when meeting in the streets have greeted one another by the name of the prevailing remedy, certainly for the time a polychrest.

Some precautions ought to be mentioned here to prevent the abuse of this rule.

We must carefully distinguish what may depend on endemic influences. We know that once at the same time that Nux vomica was indicated for all toothache patients in Leipzig, Pulsatilla in the Lausitz, Cocculus in Basle, and this in more than 90 per cent. of the patients: The endemic character may be modified by the epidemic one, but hardly ever entirely supplanted. We must again strictly separate from endemic influence, whatever may be caused by influences acting on the patient or on the dwellers in one and the same house. Dr. Heim in Berlin once had a patient, who, though he had not taken a particle of mercury, showed symptoms simulating mercurialism; he found out that other young men, working in the same office, suffered in a similar manner, as there was formerly a looking-glass manufactory in that house. He odered the flooring to be removed, and a quantity of running quicksilver was discovered. Granvogl relates a very instructive case in which diseases were caused by the dry rot, the house-fungus (merulius lacrymans). (I, 201, 2.)

Teeth filled with zinc or mercurial amalgam, bedrooms covered with arsenical paper, or bedsteads with mercurial salves, etc., etc., act on the patient, and all such symptoms must be well studied and separated from endemic and epidemic symptoms.

Let us close with some important quotations from Granvogl's work, quotations which cannot be read and studied too often.

I. 127. That physiological medicine can only dream of causal cures is natural, because this is the readiest method to every superficial mind, for it would simply put the fire out, bring the drowning man into the air, establish quarantines against epidemics, provide antidotes for poison, etc., all of which, under the circumstances, may be very praiseworthy, but it thinks that with this it has done *all which is possible.*

I. 127. But that a Homœopath, at this day, should still find his El Dorado in such a cure, and so far misunderstand his great object as to wish to show that he pays no regard to constitutional conditions, which, under all relations, are as necessary to the possibility of any sickness, as the causes of disease introduced from without; this is unhappily new, because just the regard to the kind of *conditions of the disease,* which is foreign to physiological medicine, is peculiar to Homœopathy.

I. 127. The Editor of the *Zeitschrift für Homœopathische Klinik* is certainly not at all particular about what he sets before his readers, and thus we find therein (Sept. 1st, 1864) the assertion, as one being clear enough by itself: "While the cause of the disease is still efficient, the patient exposed to this cause cannot be permanently cured." As a confirmation of this proposition the well-known fact is adduced, that in the fever and ague districts, during the malaria, in spite of all use of the specific (?) Quinine, frequent intermittent cachexias occur, which can be cured only (!) by removing the patient from the sickly neighborhood, *i. e.*, by a causal cure.

These are clearly assertions of physicians of as yet not much experience, but one may read them, if he wishes to waste time. In the first place, Qunine is a specific only for *certain* forms of intermittents, sharply defined by Homœopathy; secondly, we cannot send all our patients out from their unhealthy districts, unless we have the money to give them, needful to carry out this advice; thirdly, they can, declining this advice, remain and be cured, while they live in marshy districts, not only by me, but by many other Homœopathists, since we know how to remove, homœopathically, the *constitutional conditions* to the formation of an intermittent; in the fourth place, it must be acknowledged that not only *in spite* of, but *in consequence* of, the inappropriate use of Quinine, the so-called intermittent cachexia—which is really a Quinine cachexia—arises.

II. 308. It is true that the foregoing does not show an exact correspondence between Hahnemann's doctrine and Rademacher's; yet so surprising a correspondence, that a union of both systems must necessarily take place at some future day. As regards the Homœopathic school, it should now likewise establish, both by experience and demonstration, that often one remedy for a long time proves itself to be indicated and curative in the most varied pathological forms; and the reason why this has not as yet been acknowledged on all sides, must certainly be attributed to the circumstance that but the *smallest number of Homœopathists consider it their duty to make a study of the concomitant circumstances*, and generally deem Hahnemann's advice, to pay especial attention to these concomitant circumstances, a mere caprice. (Moonshine!)

II. 309. The whole of Rademacher's obscure indication is made clear in our so-called concomitant circumstances. What Rademacher must seek in the change of his so-called epidemic constitution and at the cessation of the action of his remedies, *by accident only*, after various experiments upon the sick, this our law of similarity and the *concomitant circumstances* therein contained permits us to see, especially in the extent which I have above mentioned and found confirmed in practice, for they enable us to cast the knowing glance of the diagnostician upon the character of the individual constitution.

We see that Grauvogl also considers it a *sine qua non* that we give their just weight to the peculiarities of each patient, and by it also to the generally prevailing character. Our choice, as Grauvogl masterly proves, depends on the modalities. People might have read the *Organon* and still never examined a patient according to Hahnemann's precepts, as it never comes into their mind, by summing up the symptoms of different patients, to find the *one* remedy which will cure all cases; if such modalities should be declared moonshine or not, Grauvogl thus answers, II., 229: "But let ignorance do as it pleases, we are not responsible for its acts or its views."

1863, BOENNINGHAUSEN'S

Work on intermittents, which will soon appear in a comparative manner, with the addition of our indigenous remedies, in so far as we have reliable observations about them, is an extraordinary and important work. He who understands to make a clear examination of his patient, will find out the benefit of such a work. It contains an experience of long years in a home of intermittents.

We think this will be a suitable place to quote from Boenninghausen's *Aphorismen des Hippocrates* (a most valuable treasury in our literature), as it still awaits its translator.

p. 110. That every intermittens *per se* is considered as a disease *sui generis*, and treated as such, is the most frequent cause of China-cachexia.

The error, with its sad consequences, will last till we are convinced that, under the seeming cover of an intermittent, numerous diseases of the most diverse kind may exist, which have nothing in common in their peculiarities, and whereby the returning type offers us only a single symptom of no great value.

Homœopathy in treating intermittens, whether it be quotidian, tertian, quartan, anteponing or postponing, considers in the selection of the remedy all *essential* and especially the *characteristic* symptoms, and unites them into *one picture of the disease*, as it also does in every other disease. (Tout pour le choix du Medicament que pour le diagnostic des maladies, c'est l' universalité des symptoms, que le Medecin homœopathe doit utiliser.—*Leon Simon, Exposition*, p. 339.) The homœopathic physician frequently sees only the return of the paroxysms with the uncertain name of "intermittent fever" attached to it ; he is only told of the periods of chill, heat and sweat, which hardly ever will lead us to the selection of the remedy ; and the far more important concomitants are pushed in the background ; its accompanying affections frequently mistaken, given wrongly, or never mentioned at all. (By comparing the numerous Hippocratic pictures of disease with those of recent medical writers, we easily recognize the influence which school and the prevailing scientific tendency exert also in that direction. We need not wonder that the same is the case in works published by Homœopaths, and necessrily a homœopathic theory, based on it, must be insufficient and impracticable.) Where the deficiencies are obviated, as it is the paramount duty of the physician, and *sufficient symptoms* are sought to indicate *with certainty* the remedy covering every symptom, there also a certain cure of the fever with all its adnexa of other ailments is sure to follow, no matter what may be the time of the year or the state of the atmosphere. The ailments appearing during the different stages (chill, heat, sweat) mark in the same natural mode the species, and consequently also the different remedies of the fever, as *e. g.*, in the species of *maples*, the appearance of blossoms either before the breaking out of the leaves (A. platonoides), or simultaneously *with* them (A. campestris) or *after* them (A. pseudo-platanus). Only unhealthy districts, which constantly reawaken the fever, or other similar circumstances, make here a natural exception, and strict dietary rules must be given and carefully followed out, if the cure should be a permanent one. The *only real difficulties* in the homœopathic treatment of intermittents lie only in the *search* for *perfect, sufficiently individualizing picture of the disease*, and the remedy corresponding to it. We must not look for the remedy in the intermittent, as if it were a substantial, unchangeable disease, or alone in the prevailing epidemic, but as Hufeland repeats from Hahnemann : "For every solitary patient the remedy must be separately searched for and found *de novo*." (We do not conceal the difficulties in the homœopathic cure of intermittents, as Hahnemann complained already about it thirty years ago, Griesselich Skizzen, p. 33 ; also the discussion at the meeting at Hanover, 1860, leading to no results whatever). But still we ought to mention what Hahnemann teaches about this disease in the *Organon*, §§ 234-244, and where he expressly wishes us to consider well the concomitants during the different stages as well as during the apyrexia, especially the symptoms mentioned in § 50. Only by great care and clearsightedness will we be able to find out these concomitants, and we must not allow ourselves to be blinded by the most conspicuous general symptoms (chill, heat, sweat), as they hardly offer any really characteristic phenomena. But when, as it is frequently the case, intermittents prevail epidemically, we must put together all the symptoms observed in that relation on many patients, and thus gain a valuable point for a special study of every individual case, as also for the more certain selection of the remedy.

Every new discoverer or inventor in the province of natural sciences possesses the right of naming his invention. As soon as this is done nobody has the right to exchange that name for another, or to apply this name to something else. Hahnemann made full use of this indisputable right for his discovery of Homœopathy, and excluded expressly everything foregin to his doctrine. Although every physician may hold adverse views and opinions, still so much is selfevident, that thus they forfeit the right of calling themselves Homœopaths, as those did, who already at the very beginning deviated in some points from the original doctrine, and called themselves "Specificists." Now the name seems to have become so alluring that many a physician usurps the predicate of a Homœopath, though he only knows the *Organon* and the Materia Medica pura, through poor compendia or repertories, though he rejects the doctrine of dynamization or uses instead his decimal scale, for which no authorization can be found in the works of Hahnemann, though he continually repeats his remedy in spite of the express direction to the contrary, and many more deviations. Such physicians, by their own practice, forfeit the right to call themselves Homœopaths, and their practice can never be accepted as pure Homœopathy. The vast difference between the doses of the Allopaths and those of true Homœopaths still exists, and will exist for evermore.

Appendix.

As very few among the adherents of our school know what Hahnemann taught about the treatment of epidemic typhus, and of the usual intermittent fever, we will close with these remarks :

In 1809 Hahnemann published in one of the most popular papers of Germany, how easy one could cure an intermittent which at that time had spread over the middle of Europe, and the doctors treated with very little success. His collective description of this epidemic is a master-work, not surpassed by any other in the literature of medicine. See Lesser Writings, translated by Dudgeon.

By the symptoms, he found that in most cases the curative drug was *Nux vom.;* in some of the worst cases *Arsenicum,* and *Camphora* the palliative in the worst of all.

In 1812, after the retreat of the French from Russia, the sufferings of the troops, and the still greater of the people, caused a contagious typhus, against which *Nux vom.* or *Pulsatilla* proved to be efficacious.

In 1813, after the battle of Leipzig, the streets were full of dead horses, wounded men suffering thirst and hunger, and an entirely different war typhus broke out. Hahnemann, having remained in town, suffering with his large family, his youngest daughter being eleven years old, all the torments, wants, even of pure water, now attended the sick, a hospital being intrusted to his care, and of 180 patients, suffering from war typhus, he lost only one old person. His official report to the Russian authorities (governing Saxony at the time) made quite a sensation, and was followed by investigations. In such a manner, Homœopathy was introduced to the Russian nobility. Hahnemann's reports and papers, deposited in Dresden, disappeared after the Russians had left, and Hahnemann's personal enemies superintended the archives.

Hahnemann analyzed with the greatest care the symptoms of the first and of the second stages, mentioning all the spmptoms indicating *Bryonia,* or in other cases, *Rhus-tox.* For the second stage he recommended

Hyoscyamus, and in some peculiar cases, *Spiritus nitri dulcis* and published his advice.

Hahnemann treated every year cases of intermittent fever, which he reported in his *Chronic Diseases*, I., 165, for the years from 1816 till 1828.

Intermittents nearly appear every year in a somewhat different form.

Since I learned to cure the tedious diseases and dyscrasias by a homœopathic destruction of its psoric fountain head, I found every year the epidemically prevailing intermittents to differ in their character and in their symptoms, and thus a different remedy was every year specially indicated one year *Arsenic*, another one *Belladonna* or *Antimonium crudum*, or *Spigelia*, *Aconite* in alternation with *Ipecac.*, *Nux vom.*, *Murias ammoniæ*, *Natrum mur.*, *Opium*, *Cina* alone or in alternation with *Capsicum*, or *Capsicum* alone ; *Menyanthes*, *Calcarea*, *Pulsatilla*, *Carbo anim.* or *veg.*, *Arnica* alone or in alternation with *Ipecac.*, etc., curing the fever in a few days. But neither will I exclude any other non-antipsoric remedy, if they only homœopathically cover the whole complex of symptoms during the apyrexia as well as during the paroxysms. About the *Peruvian Bark* I would mention that it will *suppress* in frequent large doses and in a concentrated form *(Quinine) the type of the fever*, changing it to a China-cachexia, difficult to eradicate. *China* only suits the intermittents endemic to marshy districts, which can only be cured by it in combination with antipsoric remedies. At the beginning of treatment of an epidemic intermittent, we advise to give at first a small dose of *Sulphur*, or in suitable cases *Hepar* in a globule or by olfaction, awaiting its action for a few days till the amelioration ceases, and then only we give the non-antipsoric homœopathic remedy, corresponding to the genius epidemicus of that year, in one or two doses, but always only at the end of the paroxysm.

Since then, experience taught us that it is more desirable not to give *Sulphur* or *Hepar* only, but the remedy corresponding to the stationary habitus of diseases before the development of the epidemic, which also will be best given before the paroxysm, and not afterwards. Where we have a remedy for some epidemic, on the basis of which others act better, *Sulphur* in cholera, *Carbo. veg.* in yellow fever, *Sulphocyan combinations* in variola (*Sinapis*), we give it at the first sign of the disease and stick to it as long as it ameliorates.—*North American Journal of Homœopathy*, February, 1873.

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THE MATERIA MEDICA.

29.—Chelidonium Majus.

(*Continued from* p. 118.)

Respiration.

. *Tightness of the chest.* R.A.,S.
. His chest is so tight (the first 4 hours). Sch.
1040. *Oppression of the chest and breath.* R.A.,X.,Kch.,S.
. OPPRESSION OF THE THORAX ON EXPIRATION. R.A.,S.
. Oppression of the chest when walking (in 2 hours). T.
. SHORTNESS and *difficulty of breathing, with tightness and anxiety* in the chest (in 10 min.). F.X., (*on awaking about midnight*), X.
. IMPEDED RESPIRATION (in 5 min.), X.; (in 2 hours), F.X.; (the 4th day). T.K.
1045. PRESSURE ON THE CHEST, IMPEDING THE RESPIRATION. T.,X.
. On inspiring, it feels as if the chest were pressed on, after dinner. Ng.
. Difficulty of breathing, with shooting in the left thoracic region backwards, after dinner. Ng.
. *He can only breathe short, and with difficulty and anxiety,* as if he must choke (for some minutes). X.
. *Respiration impeded in the evening in bed.* X.
1050. *Anxiety in the chest.* L.,P.,F.X.
. Constricted feeling on the chest. L.

. *Short breathing and oppression*, AS IF THE BREAST WERE CONSTRICTED AND THE BREATH COULD NOT PASS. Hs.,K.

. *Tightness of the chest, as if it were cramped up in a cuirass.* X.,N.

. Her clothes cause tightness of the chest, so that she has to slacken them. F.X.

1055. Tightness of the chest like cramp, with nausea. N.

. LONGING FOR FRESH AIR TO BREATHE MORE EASILY (the 4th day). X.; (in ½ hour). F.X.

. Forced to take a deep inspiration (the 2nd day). F.X.,X.

. Hot breath, which dries the mouth and lips (in 10 min.). F.X.

. He cannot at each breath inspire as much air as he wishes, therefore expires quickly in order to be able to inspire again soon. A few very deep acts of respiration to relieve these sufferings. X.

1060. Quicker breathing, which became slower after five eructations. (A child.) R.X.

. *Difficult respiration, with short fits of coughing*, preceded by pain first in the right then in the left side of the thorax. A.X.

. She must breathe quick and short in order to make somewhat tolerable the pains in the chest and back (the 2nd day). F.X.

. She cannot take a deep breath for violent stitches in the right side. F.X.

CAVITY OF THORAX.

. Feeling of congestion towards the chest (soon after the dose). X.

1065. Congestion in the apices of the lungs, with dull throbbing in them. T.

. Dull throbbing in the base of the lungs. T.

. Pulsations under the upper portion of the sternum. T.

. At each breath pain inside the chest, with short dry cough, which increases the pains and returns after short pauses (pulse 90), (the 2nd day). F.X.

. On stooping low, pain deep in the chest, especially towards the bodies of the vertebræ, so that the stooping could not be continued; also after walking fast, blowing the nose, and sneezing; at the same time more externally along the spinous processes. Le.

1070. Inward burning between the chest and shoulder-blades, with internal heat and want of breath. N.

. On deep inspiration, painful tension round the inside of the base of the thorax (in ¼ hour). X.

. Stitch in the chest with interruption of the breathing. F.S.

. Stitches in the right side behind the ribs. F.S.

. Stitches in the lower part of the left lobe of the lungs. S.

1075. IN THE LEFT LOBE SORENESS LIKE A WOUND, aggravated BY DEEP BREATHING, coughing, and sneezing. Rr.

. Pain inside the chest, behind the sternum, especially felt when breathing. A.H.

. High up behind the sternum a spot which smarts like a wound. Hs.

. Spasmodic pressure behind the sternum, in the middle, on a surface about 2 inches diameter, on awaking in the night. Hs.

. High up behind the sternum a feeling of dust not to be removed by coughing. Hs.

1080. Palpitation on walking in the street for ½ minute. F.X.

. Palpitation towards evening, after sitting down somewhat tired. F.X.

. Palpitation in the evening directly after lying down. F.X.

. Palpitation in the evening for some hours. N.

. Palpitation (for 1 hour). F.S.

1085. Violent stitches in the cardiac region, followed by *strong palpitations with anxiety and agitation all day.* F.S.

. *Sudden great anxiety, with palpitation.* The beating of the heart is not accelerated nor irregular, but so strong that the clothes are lifted by the movement communicated to the thoracic parietes, and she hears it so plain that she fancies others must hear it too. F.X.

THORAX.

. Pains in the ribs of each side on bending the thorax on one side (in ½ hour). X.

. Tensive pain in the whole thorax (the 6th day) X.

. Constrictive pressure under each arm as if the chest was tight-laced. S.

1090. Drawing pressure from the right shoulder-blade, through the chest towards the sternum. S.

. Stitches in the whole of the chest. F.S.

. On inspiration fine stitches like needles in the chest, passing from the left to the right side, chiefly outside (in ¾ hour). Ng.

. The seventh and eighth rib of each side are painful to the touch, and on drawing the breath as if they were wounded, worst on the right; a cold sensation extends from the spine to these ribs all the way to the sternum, worst on the right. F.X.

1. *Anterior paries.*

. Pain and jerking in the left clavicle. F.S.

1095. Pain in the region of the right clavicle. Gs.

. OPPRESSIVE PRESSURE UNDER THE LEFT CLAVICLE UP THE NECK. S.

. Shooting in the right half of the chest in the region of the nipple (in 2 hours). In an hour after the same on the left. Le.

. Fine stitch in the left nipple. Le.

. SHOOTING IN THE RIGHT SIDE, CLOSE UNDER THE MAMMARY GLAND. F.S.

1100. Pain in the upper part of the chest. Kch.

. Tensive pain from the left pectoral muscle up towards the neck (in 10 min.). X.

. LANCINATING PAINS IN THE PECTORAL MUSCLES. W. Pr.

. Tension on the chest in front (in $\frac{1}{2}$ hour). X.

. PRESSURE ON THE CHEST IN FRONT. X.,Le.

1105. PAIN IN THE STERNUM CLOSE ABOVE THE SCROBICULUS CORDIS, when yawning. Rr.,F.S.

. Jerking in the sternum. F.S.

. Pressive pain and burning in the sternum. K.

. Violent *pains in the sternum* at each respiration (in 6 hours). F.X.,AH.

. Awoke at 4 a.m. with pressive pain on the chest in front, as if the sternum was forced in. Kch.

1110. Stitches in the lower part of the thoracic cavity. S.

. Burning on the lower part of the chest (in $\frac{1}{4}$ hour). Ng.

. Shooting, *jerking pain a little to the right from the lower part of the sternum right through towards the back,* aggravated by breathing. By laying the trunk forwards the pain is worse in the chest, by laying it backwards worse in the back. F.X.

. She cannot draw a deep breath for pains in the front of the chest (the 2nd day). F.X.

. She must sit upright and dare not move, otherwise the *pains in the chest* are intolerable (the 2nd day). F.X.

1115. The clothes feel too tight on the chest, F.X.

. Eructation relieves the pains in the chest. F.X.

. When writing, a sharp stitch on inspiring or straightening the body on the left near the scrobiculus cordis, p.m. (the 1st day). Ng.

. Violent stitches six times in rapid succession in the cardiac region. F.S.

. Stitches in the cardiac region on coughing. F.S.

1120. Dull STITCH IN THE CARDIAC REGION. F.S.,Ng.

. Oppressive pressure in the cardiac region. S.

. STITCHES UNDER THE HEART. S.,F.S.

. Stitches in the region of the heart through the left side of the chest, so that she has to breathe short and quick. F.X.

. STITCHES IN THE BEND OF THE RIBS ON THE LEFT SIDE IN THE CARDIAC REGION (in 5 min.). X.,F.S.

1125. LANCINATING PAINS IN THE HEART. W.Pr.

2. *Right side.*

. Deep pressive pain without cough, which does not allow deep inspiration. T.

. PAIN as if from a deep-seated abscess. T.P.

. Stupefying pain. T.

. Pain between the 6th and 7th ribs, on bending the trunk to the left (in ½ hour). X.

1130. Pain in the lower ribs, as if from an ulcer aggravated by breathing (the 13th day). F.X.

. DRAWING from above downwards. Gs.,Rr.

. Pain in the lower part of the wall of the chest on the right, quite to the right side for the breadth of a hand, aggravated by each inspiration. F.X.

. Sudden *violent pain of the right side* in the region of the 7th and 8th ribs *increased by respiration* and movement for 2 hours, preceded and followed by burning headache. F.X.

. Drawing pains from the lower part of the sternum towards the right quite round to the spine, with SORE PAIN there, so that even the touch of the clothes increases the pain. F.X.

1135. Repeated stitches, lasting some minutes, compelling short breathing; on attempting deeper breathing, intolerable stitches. F.X.

. *Stitches in the right side.* A.X.,S.,X.,P.,F.S.

. Stitches in the right side for two hours, with chill, heat, and red cheeks. Kch.

. Stitches at every inspiration. F.S.

. At 2 p.m. *violent stitches* in the under part of the thorax, *aggravated by breathing, movement, and cough.* F.X.

1140. *Violent stitches* for three hours, obliging her to inspire slowly and carefully, and also to speak softly; sometimes *not to move* or speak at all. F.X.

3. *Left side.*

. Tearing pressure in the left axilla and thence further forwards towards the nipple (in 20 hours). R.A.

. PRESSIVE PAIN (in 10 min.). X.

. Pressure and tightness. K.

. Drawing pain (in ½ hour). X.

1145. Pain soon passing off. P.

. Pain as if bruised, AGGRAVATED BY MOVEMENT (in 1 hour). X.

. Undulating pain. X.

. *Stitches.* X.,P.,S.,N.

. Stitches when sitting. N.

1150. STITCHES TOWARDS THE SHOULDER-BLADE. X.,Kch.,S.

. Awaking with stitches, confined chest, and anxiety. *She cannot take a deep inspiration for the stitches* (for ¼ hour). K.

NAPE OF THE NECK.

. Paralytic pain. Hs.

. Pains in the nape. L.,K.

. *Stiffness* (in 2 min.). X.,Hs.,Rr.,Kch.,F.S.

1155. *Drawing pain in the muscles of the nape* (in 2 min.). X.,F.X.,K.,Hs.,Rr.,P.

. PRESSURE IN THE NAPE. H.,A.H.

. Weight in the nape. A.H.

. *Pressing pain the muscles on the left* (in 10 min.). X.

. Sensation of constriction in the muscles of the nape, as if the head were drawn back (in 10 min.). F.X.

1160. *Sensation as if the neck was broken.* Hs.

. Cracking and creaking in the cervical vertebræ on moving the neck (in 10 hours). Hs.

. Pains in the 1st cervical vertebra for 7 hours, increased by moving the head and by pressure. F.X.

. Feel as if the vertebræ in the nape were torn out of their place. F.X.

. INCREASE OF THE PAINS BY TURNING THE HEAD AND BENDING IT BACK. X.,Kr.

BACK.

1165. Sharp shooting near the vertebræ, in the middle of the back. R.A.

. STITCHES BETWEEN THE SHOULDERS. S.,F.S.

. Several obtuse stitches between the shoulder-blades, p.m., when sitting (the 1st day). Ng.

. Pain in the spinal column between the shoulder-blades (in ½ hour). X.

. *Stiffness in the back* between the shoulders (in 7 hours). X.

1170. Oppression between the shoulders. S.

. *Drawing pains in the muscles of the back.* W.Pr.

. *Drawing pain between the shoulder-blade down to the sacrum.* K.,H.,A.H.,Gs.,Hs.,F.S.

. Burning between the shoulders at 1 p. m. Ng.

. BURNING IN THE BACK. Kch.,S.

1175. CHILL AND HORRIPILATION IN THE BACK. L.,Gs.

. Very severe cold in the back. Le.

. Shudder running down the back. Sch.

. TENSIVE AND PRESSIVE PAIN IN THE WHOLE OF THE BACK, extending round towards the chest (in 8 hours). X.,Hs.,S.

. BACK AS IF BRUISED WHEN MOVING THE TRUNK. X.,F.X.

1180. *Pain in the back* as if after excessive muscular straining (in 18 hours). X.

. PAIN IN BACK, ESPECIALLY ON RISING AFTER STOOPING, and on standing up after sitting. Hs.,Kch.

. Pressure in the back, quite up into the shoulders, on sitting in a stooping posture; diminished on sitting upright (in 1½ hour). Ng.

. Dull pressure from the sacrum to under the shoulder-blades. S.

. *Wound-like pain* in all the *vertebræ increased* by movement and *by pressure on the spinous processes* (the 2nd day). F.X.

1185. Wound-like pain in the lower dorsal vertebræ, the five lowest ribs on the right and the lumbar vertebræ, aggravated by pressure and movement (the 12th day). F.X.

. Sensation in the shoulder-blades, as if they were torn out of their place. F.X.

. The shoulder-blades painful when touched (the 7th day). F.X.

. Violent pain at every breath, around the lower angles of the shoulder-blades (the 2nd day). F.X.

1. *Right shoulder-blade.*

. Pinching spasmodic pain on the inner edge of the right shoulder-blade, which hinders him from moving the arm (in 1 hour). R.A.

1190. Bruised pain extending down the back from the right shoulder-blade. F.X.

. She awakes with pains in the right shoulder-blade, aggravated by breathing and movement of the right arm. On getting up the pains draw to the right, round towards the chest, and cause oppression there. F.X.

. Pressure under the right shoulder-blade. S.

. Drawing pressure between the shoulders, especially in the right blade and towards the right side. Gs.

. STITCHES UNDER THE RIGHT SHOULDER-BLADE. S.,F.S.

1195. Violent stitch close under the right shoulder-blade at each breath (for 10 min.). F.S.

2. *Left shoulder-blade.*

. PAIN IN THE LEFT SHOULDER-BLADE (in 2 min.). X. (the 5th day). F.X.,R.,P.

. Drawing pain in the left shoulder-blade (in ½ hour). X.

. Pain like dislocation in the left blade. F.X.

. PAINS ON THE OUTER EDGE OF THE LEFT BLADE. X.

1200. VIOLENT PAINS ON THE LOWER ANGLE OF THE LEFT BLADE; from thence violent stitches right through the chest, forwards. F.X.,X.

. Stitches close under the left blade. S.

. Tensive pain close under the left blade. S.

. Burning on a small spot on the upper part of the left blade (in ¾ hour). Ng.

3. *Lumbar vertebræ.*

(Lumbar region, see Urinary system.)

. PAIN IN THE LUMBAR VERTEBRÆ. Hs.,F.S.

1205. The lumbar vertebræ painful to the touch. F.X.

. TEARING PRESSURE ON THE LOWEST LUMBAR VERTEBRÆ forwards towards the haunch bones, AS IF THE VERTEBRÆ WERE BROKEN asunder, only on bending forwards and when he bends back; perceptible for many days even when walking (in 86 hours). R.A.,F.X.

. PAIN IN THE LUMBAR VERTEBRÆ AS IF THEY WERE SMASHED. F.X.

. WOUND-LIKE PAIN IN THE LOWEST LUMBAR VERTEBRA, AS IF IT WERE DISLOCATED OR SMASHED (the 5th day). X.,F.X.

4. *Sacrum.*

. Throbbing pain. T.
1210. Bruised pain on moving (in 10 hours). F.X.
. PAIN all day (the 5th day). F.X.,Hs.,P.S.

UPPER EXTREMITIES.

. Lancinating pains. W.Pr.
. The veins on the hands and arms are swollen (in 3½ hours). R.A.
. THE HANDS HOT UP TO THE MIDDLE OF THE FOREARM, AND SWOLLEN, WITH DISTENSION OF THE SUPERFICIAL VEINS. X., F.X.
1215. Œdematous swelling of the forearms and hands. F.X.
. Paralysis *and weight of the arms* as if weights were hung upon them. X.
. ARMS AS IF PARALYSED, with vibration in them. H.,A.H.,Hs.

a. Right arm.

. In the morning RIGHT ARM IS AS IF PARALYSED, with sensation of numbness and cold; the temperature actually lower than in the left. Relieved by rubbing. F.X.,P.
. Feel in the right arm like weakness, with frequent intermission (in ½ hour). Ng.
1220. DRAWING PAIN FROM THE RIGHT SHOULDER DOWN TO THE WRIST, with cold and stiffness of the arm. F.X.,S.
. FREQUENT JERKING IN THE RIGHT ARM. K.
. Tearing pain in the right arm. P.
. Drawing pain from the neck over the right shoulder down to the wrist, intermitting for some minutes and then returning, aggravated by using the arms, especially in writing. Rr.

b. Left arm.

. Paralytic DRAWING IN THE LEFT ARM. Hs.,Rr.
1225. *Paralytic pain in the left shoulder and the whole arm* (in 7 hours). X.,Rr.
. Drawing pain from the left shoulder-blade towards the upper arm. P.
. Drawing pain from the left shoulder to the fourth finger (in 10 min.). X.
. Violent pain from the shoulder on the outside of the arm, extending downwards. X.

1. *Shoulders.*

. Drawing in the shoulders. P.

a. Right shoulder.

1230. *Pain in the right shoulder.* T. (in 1 hour). Gs.,S.
. Paralytic pain in the right shoulder (in ½ hour). Hs.
. Painful tearing. P.
. STITCHES IN THE RIGHT SHOULDER. S.,F.S.
. Drawing in the right shoulder. Kch.
1235. Pressure in the right shoulder on moving the upper arm. A.X.

. Bruised pain. Le.
. Jerking in the right shoulder. F.S.
. Pain in the right shoulder, aggravated by moving the arm (the 3rd day). F.X.
. Very sharp shooting in the right shoulder-joint, p.m., at rest (the 1st day). Ng.
1240. In the evening, in bed, violent pains in the right shoulder, with a feel on moving the arm as if it were smashed; the arm is then cold and stiff. F.X.

b. Left shoulder.

. *Pain in the left shoulder as if broken* or dislocated, with cold feel in the upper arm (for 4 hours). F.X.
. *Pain in the left shoulder*, extending down into the deltoid. F.X.
. Painful drawing in the left shoulder. Hs.
. PAIN IN THE LEFT SHOULDER as if after laying too long upon it (in 5 hours). Hs.,Kch.

2. *Axillæ.*

1245. Shooting in the left axilla (in 2 hours). R.A.
. Perspiration in the axilla. P.

3. *Upper arm.*

a. Right side.

. Tearing in the middle of the right upper arm, as if in the marrow (the 1st day). Ng.
. TEARING IN THE MUSCLES OF THE RIGHT UPPER ARM (in 28 hours). R.A.,P.
. Itching on the outer surface of the right upper arm, passing off when scratched (in 1¼ hour). Ng.

b. Left side.

1250. Pain in the deltoid and biceps on moving the arm, all day, so that he cannot draw on his coat without help. X.
. Tearing in the flesh of the left upper arm close under the shoulder-joint, a.m. (the 1st day). Ng.
. Rheumatic pains from the left shoulder to the elbow. S.
. Jerking in the left upper arm. F.S.

4. *Elbow-joint.*

. Cramping pain in the left elbow-joint, on bending the arm still worse (in 4½ hours). R.A.
1255. PAIN CLOSE ABOVE THE LEFT ELBOW-JOINT. X.
. Pain in the right elbow-joint. S.
. Stitches in the right elbow-joint. Rr.

5. *Forearm.*

a. Right.

. Fatigue of the muscles of the right forearm, so that they could not be moved without difficulty, and gave pain on movement or on grasping anything (in 26 hours). R.A.

. Pain in the right forearm. S.
1260. Touching the right forearm causes pain. F.X.
b. Left.
. Drawing in the left forearm. R.A.
. PARALYTIC feeling (in ½ hour). X.,P.
. Stitches through the inside (in ¼ hour). P.

6. *Wrist.*

. Trembling in the wrist-joints and fingers. F.X.
1265. Paralytic drawing in the wrist-joints. F.X.
a. Right.
. A catching and stiffness in the right wrist-joint, only perceptible on moving it. R.A.
. Pain in the right wrist-joint. S.
. Pricking in right wrist-joint. S.,F.S.
b. Left.
. The left wrist-joint was as if stiff, in the evening. R.A.
1270. Pain of the skin, as if after a burn, on the lower joint of the left ulna. X.
. Tiresome pricking itching on a small spot over the left wrist, on the outside. X.

7. *Hands.*

. Cold hands (in 2¾ hours). R.A.,X.,Lc.,F.X.
. Shuddering of the hands, though warmer than usual (in ¼ hour). R.A.
. Feel of swelling in the hands (in ¼ hour). F.X.
1275. DISTENSION OF THE SUPERFICIAL VEINS OF BOTH HANDS. X., Ng.,F.X.
. Drawing in the palm, where was also a quivering movement. R.A.
. Itching in the palm of the hand. Ng.
. Burning in the palms. Kch.
. Remarkable dryness of the hands. F.S.
a. Right hand.
1280. Clumsiness of the hand in writing. X.
. Shooting in the right hand. F.S.
. Tearing shooting pain in the right metacarpals, much increased by pressure (in 26 hours). R.A.
. Fine tearing on the metacarpals and carpals of the right thumb (in 7 hours). R.A.
. Pinching tearing pain in the back of the right hand (in 1½ hour). R.A.
1285. Crawling in the right hand. S.
. Violent itching on the back of the right hand, near the joint of the third finger (in 5 min.). X.
. Burning in the ball and still more in the carpal joint of the thumb. S.
b. Left hand.

. Feeling of swelling in the left hand. X.
. The left hand seems heavier on lifting it. X.
1390. Feel as if the hand were swollen, insensible, paralysed, as if she could not bend it (in 9 hours). F.X.
. Paralytic tearing in the metacarpal bones and the last joint of the thumb and forefinger of the left hand. R.A.
. DRAWING PAIN ON THE BACK OF THE LEFT HAND. X.,P.
. Tearing from the left wrist to the tips of the two little fingers, passing off when rubbed (the1st day). Ng.
. Itching in the left palm. P.

8. *Fingers.*

1295. TIPS OF THE FINGERS COLD. S.,F.S.
. The third and fourth fingers benumbed on awaking. X.
. Tonic spasm in the flexors of the fingers ; the closed hand could not be opened without trouble (morning on awaking), (the 5th day). X.
. Shooting pain in the middle finger. F.S.
. Shooting pain and heat in the fore and middle fingers, which had been sprained eight weeks before. Rr.

a. Right hand.

1300. The anterior phalanges of the fingers of the right hand grew yellow and cold, as if dead, and the nails blue (in 1 hour). R.A.
. Fine tearing in the tips of the fingers, right hand. R.A.
. Frequent tearing in the foremost phalanx of the little finger, right hand (in 3½ hours). R.A.
. Stitch in the second and third joint of the right forefinger. S.
. Pressing pain in the right thumb. S.
1305. Crawling in the right thumb. S.
. Pain in the little finger. S.
. Itching on the right thumb, passing off only after long scratching, and then returning worse than ever (in 1 hour). Ng.
. Itching on the last phalanx of the mid finger (in 1½ hour). X.

b. Left hand.

. Jerking in the fingers of the left hand (in 10 min.). F.X.
1310. Cramp in the fingers, left hand (in 25 min.). F.X.
. Violent drawing in the thumb-joint of the left hand, forenoon (the 3rd day). Ng.
. SHOOTING DRAWING PAIN IN THE LEFT FOREFINGER (in 1½ hour). X.,S.
. Strong pressure in the left forefinger. Le.
. Drawing on the left side of the left mid finger from the middle to the back joint (the 1st day). Ng.
1315. Itching in the second joint of the left middle finger. S.
. Itching in the ball of the anterior phalanx of the left mid finger, passing off only by long rubbing, when walking in the open air (in ¾ hour). Ng.
. In the second joint of the left ring finger, pain as if from a blow. Hs.

LOWER EXTREMITIES.

. *Lancinating pains.* W.Pr.
. Paralytic pains. Hs.
1320. Feebleness in walking (in 1½ hour). X.
. Remarkable weakness in the legs. F.S.
. She cannot get on in walking without difficulty (the 12th day). F.X.
. *Legs as if bruised* (in ½ hour). F.X.
. *Bruised pain* from the thighs to the calves, worse on walking and when touched. F.X.
1325. *Bruised feel,* especially in the joints of the hip, knee, and ancle. Rr.
. *Her legs appear to her* twice as thick and *heavy,* so that she dreads incipient dropsy. F.X.
. The pains in the inguinal region hinder her walking. F.X.
. Drawing from the calves up to the knee and thigh. Kch.
a. Right leg.
. The right leg cannot be raised without trouble. F.X.
1330. Paralysed, stiff, and cold feel in the right leg (in 16 hours). F.X.
. FROM THE HIP BONE TO THE TOES OF THE RIGHT FOOT PARALYTIC DRAWING PAIN, CONTINUING THE SAME WHETHER WALKING, LYING, OR SITTING, and disappearing suddenly (in 39 hours). R.A. (in 10 min.). X.
. Tearing in the right leg from above downwards. P.
b. Left leg.
. Burning in the left leg (in 10 hours). F.X.

1. *Thighs.*

. Falling asleep of the anterior surface of the thigh, with fine stitches and raw pains (after external use). R.A.
1335. Paralytic pain close above the knee. X.
. Drawing pain from the lower part of the rectus femoris into the patellæ (the 8th day). X.
. Drawing pain on the inner side of the thigh (in 5 min.). X.
. Tensive pains and sense of swelling in the thighs for the breadth of two hands midway between the hip and knee. F.X.
. DRAWING PAIN IN THE HIPS. X., HS.
a. Right side.
1340. Numb pain in the right hip. T.
. *Pain in the right hip* on rising from a seat (the 6th day). X.
. *Shooting in the right hip.* F.S.
. Pain in the right ischium as if from a blow. Hs.
. Tearing in the right thigh. P.
1345. Pain in the right thigh as if after a long walk. Hs.
. Pain as if from a blow in the middle of the right thigh. Hs.
. Pressing pain on the middle of the right thigh, in the rectus femoris. X.

b. Left side.

. Burning itching in the left hip-joint, on the front (in 10 min.). R.A.

. Burning in the region of the left loin and left hip (in ¼ hour). Ng.

1350. SHOOTING PAIN IN THE LEFT HIP-JOINT (in ½ hour). X.,Rr.

. Pain like dislocation in the left hip, preventing walking. T.

. Pain in left ilium, as if from a blow. Hs.

. A kind of paralysis in the left thigh and knee when stepping down. R.A.

. Shooting on the inner side of the left thigh. P.

1355. Pain like a blow on the left thigh, three fingers from the knee. Hs.

2. *Knee-joint.*

. KNUCKLING IN (giving way) OF THE KNEES WHEN STANDING AND WALKING (in 12 hours). R.A.,F.X.

. Pain in the knees. K.

. Pain in the hams when walking. A.X.

. Pain in the patella when walking. X.

1360. PAINS IN THE KNEES AS IF AFTER A LONG MARCH (in 1½ hour). X.

. PARALYTIC DRAWING IN THE KNEES (in 8 hours). F.X.

. Weight in the knees. F.X.

. Stiffness in the knee-joints. F.X.

. Pain like a wound in the knee-joints, increased by pressure (in 2 hours). F.X.

1365. Jerking in the knees (in ¼ hour). K.

. TREMBLING IN THE KNEES. F.X.,F.S.

. Cold feel in the knees (in ½ hour). X.

a. Right knee.

. Numb pain in the right knee. T.

. Boring pain in the right knee. F.S.

1370. Drawing pain in the right knee (in 5 min.). X.

. Pressing pain in the right knee, especially on lying down. Le.

. *Pain in the right knee-joint,* aggravated by movement. F.X., A.H.,Hs.

. Pain in the right knee as if broken. F.X.

. SHOOTING IN THE RIGHT HAM (in 2 hours). R.A.,F.S.

1375. Hard pressure two fingers' width under the right patella. R.A.

. Pain in the right patella (in 1½ hour). X.

b. Left knee.

. Pain like dislocation in the left knee. T.

. Pressing pain in the left knee. Le.

. VIOLENT PAINS IN THE LEFT KNEE. X.,Rr.,F.S.,F.X.

1380. Violent pain in the left knee, especially in the posterior surface of the patella. F.X.

. Feel like a wound on the lower surface of the joint of the left knee. F.X.

. Feel of stiffness with burning in the joint (in ½ hour). X.
. *Pain in the left ham.* X.
. She cannot extend the left leg without violent pains in the knee. F.X.
1385. In walking, she is obliged to advance the left leg at full stretch, and can only extend it slowly for pain like a wound in the knee-joint, when it is once bent. In 24 hours after the medicine the pains of the knee suddenly disappear. F.X.

3. *Legs*

. *Both legs cold* and insensible (in 6 hours). F.X.,X.
. Feel of icy cold in the legs, especially the calves and soles; the legs feel cold to the touch. F.X.
. Paralytic feel in the legs. X.
. Stiffness in the leg, as if sprained. R.A.
1390. The right foot, up to the knee, actually cold, with a sensation of cold in it too, whilst the other foot retains its usual temperature (in 3½ hours). R.A.
. Tearing in the legs. Kch.
. Tension in the legs. F.X.
. *Weight in the legs* as if she could not step out, and *as if with each step she had to drag a great burden.* F.X.
. Œdema of the leg. F.X.
1395. Boring in the bones of the legs. Le.
. Shooting boring sensation in the bones of the left leg. F.S.
. Pressive pain on the left leg. Le.
. Paralytic feeling in the left leg (in ½ hour). X.
. Itching on the legs. Hs.
1400. Itching on the right leg, so that he scratched some spots raw. Hs.
. Itching on the outer surface of the lef leg, passing off after scratching (in ¾ hour). Ng.

a. Shin-bone.

. Drawing pain through the right shin-bone towards the instep (in ¼ hour). X.
. Shooting pain in the shin-bone, close above the ancle. F.X.
. Itching on the left shin-bone; after scratching, the place burns, 6.30 p.m. Ng.

b. Calves.

1405. Drawing pains in the calves. K.
. DRAWING-DOWN PAIN IN THE LEFT CALF. R.A.,F.S.
. Pains in the calves aggravated by pressure. F.X.
. Cramp in the calves. F.X.
. Tensive pain in the right calf. Gs.
1440. Tension and shooting in the calves when the legs are bent, passing off when extended (in 1 hour). Ng.
. Jerking in the calves. K.
. Trembling in the calves. F.S.
. Œdematous swelling of the calves. F.X.

. Burning in the lower part of the left calf when sitting, p.m. (the 1st day). Ng.

1415. Some burning painful spots with stitches in the middle above the tendo-Achillis; the pain is increased by scratching. R.A.

. Cool feel on the inner side of the right calf, extending into the ham, as if the part were uncovered (in ¼ hour). X.

. Itching on the inner surface of the right calf, not passing off when scratched, at 5 p.m. Ng.

4. *Ancles.*

. *Ancle-joints painful*, especially the right, *worse when walking*, as if after a false step (in 14 days). F.X.

. Paralytic drawing in the ancle-joints. F.X.

1420. *Painful pressure on the outside of the ancle.* T.

. *Œdematous swelling about the malleoli.* F.X.

. PAIN UNDER THE RIGHT INNER MALLEOLUS at every step (in 4½ hours). X., F.S.

. PRESSIVE *pain in the right ancle-joint* when sitting. R.A., Lc.

. Boring pain in front of the right ancle. F.S.

1425. *Pain in the left ancle-joint especially when walking.* S.

5. *Feet.*

. *Cold feet.* X. (in 2½ hours) F.X., A.H., Gs., Hs., S., F.S.

. Feet first cold then burning hot. Gs.

. Feet as if dead (in 2½ hours). F.X.

. *Feet as if paralysed* (in 10 hours). F.X.

1430. She cannot keep her shoes on for the swelling in her feet, though they were too large for her. F.X.

. Tensive burning pain in the bones of the right foot on the joints of the toes. P.

. Tingling in the feet as if after a long walk. Rr.

. Continued dryness of the feet, which usually perspire. F.S.

a. Heels.

. Drawing in the right heel. Kch.

1435. Stitches in the right heel. S.

. Pricking like needles under the left heel (in 10 hours). F.X.

. Violent pain in the heel, which prevents walking. T.

. Pain under the heel at every step. X.

b. Instep.

. Throbbing pain in the left instep (in 9 hours). R.A.

1440. Drawing on the left instep. Lc.

. Pricking in the left instep on walking in the open air at 3 p.m. Ng.

c. Soles.

. Cramp of the sole of the right foot, which near the toes was bent under; the cramp ceased on compression with the hand, but increased on attempting to put it to the ground (in 12 hours). R.A.

. Pain as if from a blow under the left metatarsus. Hs.
. Burning in the soles of the feet. Kch.
1445. ITCHING IN THE SOLE OF THE RIGHT FOOT. S.

d. Toes.

. Toes as if dead and insensible (in 12 hours). R.A.
. Cold feeling in the toes (in ¼ hour). X.
. Tensive burning pain in the toes of the right foot. P.
. Shooting in the right great toe. S.
1450. Shooting DRAWING PAIN on the under side OF THE LEFT GREAT TOE (in 1½ hour). X.,S.
. Pain as if from a blow in the fourth and fifth left toes, evening in bed. Hs.
. PAIN IN THE FOURTH AND FIFTH RIGHT TOES. P.,F.S.
. Itching and creeping in the toes. S.
. Itching at the root of the left toes, passing off when scratched (in 1¾ hour). Ng.

EDITOR'S NOTES.

METEOROLOGY AND INSANITY.

The Rev. Thomas Crallan, Chaplain to the Sussex Country Lunatic Asylum, has, we learn from the *British Med. Journal*, published a paper in the Transactions of the Asylum on the relation between meteorological facts and aggravations of the different forms of insanity. Mr. Crallan's facts show that increased number of fits among the epileptics, and development of mania or melancholia are invariably preceded or accompanied by marked changes, either in the same or contrary directions, in the atmospheric pressure, or solar radiation, or both. Sometimes all these three forms of disease are augmented at once, sometimes only one; but very often the maniacal and melancholic patients are affected in opposite ways, the latter being well when the former are excited, and *vice versâ*.

RECENT RESEARCHES IN CEREBRAL PHYSIOLOGY.

Dr. David Ferrier, Prof. of Forensic Medicine in King's College, London, publishes, in the *British Medical Journal* for April 26, the following conclusions respecting the functions of different parts of the Encephalon from experiments on over thirty guinea-pigs, rabbits, cats, and dogs, opportunity for which was afforded him in the pathological laboratory of the West Riding Asylum, Wakefield, by its Medical officer, Dr. Crichton Browne :—

1. The anterior portions of the cerebral hemisphere are the chief centres of voluntary motion and the active outward manifestation of intelligence.
2. The individual convolutions are separate and distinct centres ; and in certain definite groups of convolutions (to some extent indicated by the researches of Fritsch and Hitzig), and in corresponding regions of non-convoluted brains, are localised the centres for the various movements of the eyelids, the face, the mouth, the ear, the neck, the hand, foot, and tail. Striking differences corresponding with the habits of the animal are to be found in the differentiation of the centres. Thus the centres for the tail in dogs, the paw in cats, and the lips and mouth in rabbits, are highly differentiated and pronounced.
3. The action of the hemispheres is in general crossed ; but certain movements of the mouth, tongue, and neck, are bilaterally co-ordinated from each cerebral hemisphere.
4. The proximate causes of the different epilepsies are, as Dr. Hughlings Jackson supposes, "discharging lesions" of the different centres in

the cerebral hemispheres. The affection may be limited artificially to one muscle, or group of muscles, or may be made to involve all the muscles represented in the cerebral hemispheres, with foaming at the mouth, biting of the tongue, and loss of consciousness. When induced artificially in animals, the affection as a rule first invades the muscles most in voluntary use, in striking harmony with the clinical observations of Dr. Hughlings Jackson.

5. Chorea is of the same nature as epilepsy, dependent on momentary discharging lesions of the individual cerebral centres. In this respect, Dr. Hughlings Jackson's views are again experimentally confirmed.

6. The corpora striata have crossed action, and are centres for the muscles of the opposite side of the body. Powerful irritation of one causes rigid pleurosthotonus, the flexors predominating over the extensors.

7. The optic thalamus, fornix, hippocampus major, and the convolutions grouped around it, have no motor signification.

8. The optic lobes or corpora quadrigemina, besides being concerned with vision and the movements of the iris, are centres for the extensor muscles of the head, trunk, and legs. Irritation of these centres causes rigid opisthotonus.

9. The cerebellum is the co-ordinating centre for the muscles of the eyeball. Each separate lobule (in rabbits) is a distinct centre for special alterations of the optic axes.

10. On the integrity of these centres depends the maintenance of the equilibrium of the body.

11. Nystagmus, or oscillation of the eyeballs, is an epileptiform affection of the cerebellar oculo-motorial centres.

THE CALCUTTA MEDICAL COLLEGE.

II.

We left off in our last at the time when the College was just opened, and " the first and important step to a rational system of Medicine in the East was accomplished," namely the dissection of the human body by the Hindu alumni of the Institution. In the present advanced and enlightened state of Hindu Society, it is not easy to appreciate the importance and the difficulty of the step that was taken by the foundation students of the College. But the state of our Society existing at the time in question was such as to paralyse the energies of the authorities in their attempt at introducing dissection, and offered almost insurmountable obstacles in the way of the students, forward as they might have been. True, in our own medical Shastras, the most positive injunctions are given for the dissection of the human body to arrive at a knowledge of its structure and functions; but the grossest ignorance prevailed respecting the contents of these old writings. The Kavirajs, who plied their profession at the time, derived all their knowledge from modern abridgments, in which anatomy was altogether ignored. Hence the dead body was looked upon with superstitious horror, or as an unclean thing whose touch was pollution. When such was the state of feeling of Hindu parents respecting the dead body it could not have been easy for their children to altogether disregard their natural superiors, in a matter which was considered of such vital importance by the whole Hindu community. Hence it is that the event of the first dissection of the human body by the first alumni of the Calcutta Medical College has acquired so much importance in the annals of Medicine in this country, being very justly looked upon as forming an era in the medical history of the East. Hence the natural curiosity, and, we may say, the natural *anxiety*, to discover the fact as to who the individuals were who thus " rose superior to the prejudices of their early education, and boldly flung open the gates of medical science to their countrymen."

In our last issue we reproduced the current opinion as to Pandit Madhu Sudan having taken the lead in the dissection of the human body. As far as we have been able to ascertain, this opinion seems to have originated in the year 1848 when Dr. H. H. Goodeve, in his introductory lecture, made use of the following words:—"A few courageous pupils, led by the example of one whose conduct on that and many other occasions cannot be too highly appreciated—our respected Pundit Madu Suden Gupta—secretly, and in an out-house of the building, ventured, under my superintendence, with their own hands to dissect a body which had been procured for lecture." The Hon'ble J. E. D. Bethune was present at the lecture in which these words were uttered. His generous nature warmed with enthusiasm at the narration of the first dissection of the human body by the Hindus, and he resolved to perpetuate the memory of the first Hindu dissector, or as he nobly said, "the thought sprung instinctively and simultaneously within me that, if it lay in me to avert it, the memory of the man who had done this deed should not soon pass away" He accordingly intimated his wish to be allowed to present to the College the portrait of Pandit Madu Suden Gupta, which of course was granted. A life size portrait was painted by Mrs. Belnos, and was hung in the large lecture theatre, inaugurated by Mr. Bethune himself by an eloquent and enthusiastic address, in which he thus describes the scene of the first dissection:—

> I have had the scene described to me. It had needed some time, some exercise of the persuasive art, before Madusuden could bend up his mind to the attempt; but having once taken the resolution, he never flinched or swerved from it. At the appointed hour, scalpel in hand, he followed Dr. Goodeve into the godown where the body lay ready. The other students, deeply interested in what was going forward but strangely agitated with mingled feelings of curiosity and alarm, crowded after them, but durst not enter the building where this fearful deed was to be perpetrated; they clustered round the door; they peeped through the jilmils, resolved at least to have ocular proof of its accomplishment. And when Madusuden's knife, held with a strong and steady hand, made a long and deep incision in the breast, the lookers-on drew a long gasping breath, like men relieved from the weight of some intolerable suspense.

Deeply grateful as we all must feel for the generous impulse which prompted Mr. Bethune to the noble act of liberality of presenting to the College the portrait of the man, believed by him to be "the first Hindu anatomist under British rule," we must not allow even gratitude to blind us to the real facts of the case. The above description, we are constrained to observe, is more rhetorical flourish than a faithful account of the scene attempted to be described. It is exaggerated as respects Madusudan, and not quite true as respects the other students. Madusudan was not singular in entering the godown where the dead body lay; and it was not all the remaining students who kept outside, clustering round the door or peeping through the jilmils. According to the authority cited by Mr. Bethune himself, and that authority no other than Dr. Goodeve himself, there *were* a few courageous pupils, who were *not* afraid of entering the room, but who clustered round the table on which the body lay, instead of clustering round the door and peeping through windows. Besides, it is not to be supposed, as the speech of Mr. Bethune leads one to do, that the students were altogether unfamiliar with the dead body and dissection. "We had not long completed the preliminary arrangements for teaching," observed Dr. H. H. Goodeve in his Introductory Lecture in 1848, "when attempts were made to commence the new system of anatomical instruction. Parts of the human body were first introduced in illustration of the daily instruction, and replaced the sheep's brains, goat's livers, wooden models, and tin representations, which formerly served the same purpose. It was not, however, till the Institution was removed to its present site, that a regular course of anatomical lectures were delivered and an opportunity afforded me to place an entire subject on the lecture table before the assembled class; an event which of course created much interest and some excitement amongst them, but which soon became familiar from daily repetition."

But even anterior to the foundation of the Medical College, prejudices of students in pre-existing institutions were observed to have given way to the light of knowledge. As early as 1826, Dr. Breton, Superintendent of the Native Medical Institution, reported that even the Hindu students were persuaded that nothing which really had for its object the preservation of human lives, was repugnant to the tenets of their religion, and they regularly attended and readily assisted in dissecting human bodies. Eight years after, the Committee of Lord William Bentinck on Medical Education, of which Babu Ram Comul Sen was a member, thought that the times were much changed and that the difficulties which stood in the way of introducing practical human anatomy appeared "no longer insurmountable;" and in reference to the medical class at the Sanskrit College, they expressed themselves as follows:—

> The Vaid students at the Sanscrit College, would be glad to avail themselves of opportunities to acquire a knowledge of practical anatomy to-morrow, if the thing could be managed in secret. They have themselves entirely got rid of their prejudices on this head; and their wish to cultivate such pursuits in secret, is merely a sacrifice of policy to the prejudices of those among whom they are to acquire their bread: for if it were known generally that during the hours of tuition, they touched a human bone, much less a dead body; it would create a repugnance to employing them, that must end in their ruin.

Over and above all that has been said, it is necessary to bear in mind, that many of the difficulties met with at the outset were, as Dr. Bramley gratefully acknowledged, overcome through the influence and co-operation of David Hare, a gentleman who, through his connection with the Hindu College and the School Society's School, where a large number of the students were educated, was intimately acquainted not only with their "general prejudices and habits of thought, but even with their individual history and character." This gentleman, who was "constantly present as the encourager of the timid, the adviser of the uninformed, the affectionate reprover of the idle or bad," who was the arbitrator of disputes among students, and who was "often called in as the mediator between parent and child," could not have failed to conquer the prejudices and quiet the fears of the young students of the Medical College, in respect of an at-first-sight revolting course of study, however ultimately it might prove to be interesting.

We have, however, the decided testimony of Mr. Bramley on the subject:—

> For the most part also the students looked with contempt upon the ignorant prejudices of their countrymen, and it was most delightful to witness the spirit current amongst them, to raise themselves above the evils of their condition. I regarded this as an incontestible proof that

their professional studies were producing their proper effects, and in proportion as this spirit developed itself, my confidence as to the result of the experiment became strengthened. A large portion of the class had already witnessed with interest the examination of bodies which had died in the hospitals they visited. Many of them moreover had been accustomed to handle and examine the portions of diseased structure which they met with on these occasions, and with very few exceptions anxiously awaited the arrival of the period, when they might display their zeal in the cause of science.

Taking the above facts under consideration, we cannot but come to the conclusion that the first act of dissecting a human body must have been undertaken, so far as the students themselves were concerned, under more favourable circumstances than those depicted by Mr. Bethune, who seems on this occasion to have been carried away by his excellent feelings, to use the language of hyperbole, rather than give expression to the bare truth. As to the part played by Pandit Madhusudan in this matter, it is very doubtful whether it was actually so prominent as that believed in by Mr. Bethune. His authority is of course Dr. H. H. Goodeve, under whose actual superintendence the dissection was performed. Dr. Goodeve's words are explicit, and it is not easy to contradict them. But neither is it easy to reconcile them with the statement made by Mr. Bramley in his first annual report of the College. "On that day," writes Mr. Bramley,—

> On that day (that is the 28th of October), which may be regarded as an eventful era in the annals of the Medical College, four of the most intelligent and respectable pupils, *at their own solicitation*, undertook the dissection of the human subject, and in the presence of all the Professors of the College and of fourteen of their brother pupils, demonstrated with accuracy and nicety, several of the most interesting parts of the body; and thus was accomplished, through the admirable example of these four native youths, the greatest step in the progress towards true civilization which education has yet effected. At this first attempt, *all their companions present assisted*, and it was delightful to witness the emulation amongst them, in displaying their willingness to recognize the importance of, and adopt, a mode of study hitherto contemplated with such horror by their fellow-countrymen.

Here is a statement made within a few months of the important event, a statement in which there is no mention of or even allusion to Pandit Madhusudan. If the Pandit had taken the lead in the first dissection of the human body, as stated by Goodeve in 1848, the first Principal of the College, who looked upon the day of that dissection "as an eventful era in the annals of the Medical College," could not have omitted to make some allusion to the Pandit, and from what is known of him, Mr. Bramley was certainly not the man to do it. Mr. Bramley's report was published *after* his death; Dr. Goodeve must have seen it, and would not have allowed the omission, which in his eyes must have been serious indeed. Principal Bramley did not, it is true, mention the students by name, but this does not affect the argument in the least. The reason, why names were not given out, was very cogent at the time. "It would appear," says Mr. Bramley, "but a just reward for the industry, and moral courage of the students who have thus more especially distinguished themselves, were their names brought to the notice of Government in the present report; but the same reason which induces them to conceal their anatomical labors, and the probable publicity of this document forbids my making the disclosure." Mr. Bramley speaks of none but "pupils," "students," who, "*at their own solicitation,*" and not "led by the example of any one," undertook the dissection of the human subject, at which first attempt, "all their companions present," "fourteen of their brother pupils," "assisted." He does not make the slightest allusion to "clustering round the door and peeping through the jilmils." In fact, it must be evident to all that the statement by Mr. Bramley regarding the first dissection in the College differs widely from that made by Dr. H. H. Goodeve in 1848, and still more from that made by Mr. Bethune in 1849. Mr. Bethune's portraiture of the scene, from whomsoever he might have derived the outline, must be disposed of as we have done. How are we to dispose of Dr. Goodeve's explicit statement? In the face of the statement in the first annual report of the College, and of the positive assertions of those who were not only present in the scene, but took prominent part in it, we are obliged to look upon it in the light of that sort of unconscious exaggeration to which generous natures are led in favor of parties who are really deserving of praise and honor.

(To be continued.)

PROVING OF KURCHI (WRIGHTIA ANTI-DYSENTERICA).

[This plant belongs to the natural order *Apocynaceæ.* Its common Bengali name is Kurchi (कुड़चि); in Sanskrit it is called kutaja (कुटज). The bark of the trunk, as well as of the root, is extensively used by the Kavirajs in hæmorrhagic dysentery, especially when the disease has assumed a chronic character. According to the common notion the bark of the root is more powerful, but there does not appear to be any foundation for this belief. The reputation of the drug is so great that there is scarcely any experienced native of Bengal who does not know it, and who will not look upon the omission of it in the treatment of dysentery as a serious omission. It forms, again, the chief ingredient of many so-called specifics, for instance, of the celebrated specific of Borala. As far as our experience goes, based upon our own practice and upon observation of the practice of our Kaviraj colleagues, we can testify to its remarkable efficacy in many instances. We can however also bear witness to its signal failure in many more instances, the reason of which must be obvious. The fact is, it has limits of its range of specificity, which can be defined by one method and one method alone, and that is, the institution of Provings in healthy subjects. The following proving was undertaken, with tincture prepared by ourselves from the fresh bark of the trunk, by Babu Dinabandhu Mukerjea, of Sibpur, an intelligent young man, remarkable for his zeal, bordering upon enthusiasm, for the cause of homœopathy, and, at his request, by a zealous friend of his. Incomplete, fragmentary as the proving is, it gives us some insight into the action of the drug, and demonstrates that while the drug is capable of deranging health, it is not at least a violent poison. So that there need not be any fear in experimenting with it in health. We trust, therefore, we shall have, ere long, other gentlemen, who, having profited by homœopathy and being in consequence interested in its spread and advancement, will rise up and give us the results of their trials with the drug. We shall thus have a complete pathogenesis of it, in the light of which we shall no doubt be able to use it as a valuable therapeutic agent. We cannot too often insist upon the necessity of the proving of indigenous drugs. Our country is a vast and rich treasure-house of remedial agents; we have only to unlock it with the key furnished to us by the genius of Hahnemann—the key of Proving. It would be a pity, indeed a shame, a serious dereliction of duty, if living in the treasure-house itself, and having the Key 'furnished to us by another, we fail or neglect to use the latter to open the former for the benefit of the whole human race.—EDITOR.]

Proving by Babu D. N. Mukerji. Aged 23. Dark complexioned. Bilious temperament. Not subject to any particular disorder, and is in good health at present.

March 15, 1873. Took 5 drops: Slight burning in the umbilical region for about 5 minutes.

16th. 20 drops: Slight burning as above.

18th. 60 drops. Thirst rather urgent. Drowsiness at 3 p. m. Giddiness. The head feels hot when lying down. Sensation of rush of blood to the head, although this was not marked. Vertigo, worse in a recumbent posture; relieved by sitting up.

19th. 2 drachms. Nothing worth noting except a slight heaviness in the abdomen.

20th. About 2 drachms. Desire to go to stool, but not very urgent; something like relief is experienced during straining, although the stools are normal. Confusion of ideas. Cannot fix the attention when reading. Thoughts concerning distant objects crowd upon the imagination, when reading a book. Crowding of ideas, causing great absence of mind.

28th. Morning 6 a. m. About 4 drachms. Half an hour afterwards a griping pain in the umbilical region was perceived, but this went off immediately as the attention was diverted. At 9 a. m., 3 or 4 hours after taking the drug, a severe griping pain was felt in the region of the navel. The pain radiated upwards. This pain, although not very distressing, lasted for about one quarter of an hour. 2 p. m. spasmodic gripings of a remittent type. The remissions induced drowsiness and desire to lie down. 6 a. m. sensation in the abdomen as if diarrhœa would come on. Grunting (ফুট্ ফাট্) in the abdomen. Constant urging to go to stool. Urging to evacuate followed by stinging pain in the rectum; while the stool consisted of small hard fæces. Violent stinging pain of an excruciating nature (সিঙি মাচের কাঁটা বিঁধিবার ন্যায়) in the rectum, preventing defecation. Had to lie down in consequence of the pain, which was followed by burning in the rectum. Afterwards soreness in the rectum. Chilliness at midnight (this was a summer night). Pulse normal. Temperature as usual.

29th. 6 drachms. Inclination to evacuate the bowels after half an hour. Pinching pain in the stomach. Desire to lie down. Great reluctance to labor of any sort. Short lasting gripes in the stomach. Desire to sleep to avoid the troublesome sensation of heaviness in the rectum. Constant desire to evacuate. Relief on straining during stool, although only small fæces are voided; constant tenesmus (অবিশ্রান্ত বাহ্যার বেগ).

31st. 1 oz. on an empty stomach, half an hour after a slimy stool. Tenesmus, with relief *during* stool. A very slight burning in the urethra whilst passing water. The penis seems clogged, although there is no actual obstruction in passing the urine. Slight giddiness at 11 a. m.; constant urging to stool with bearing down pain at the anus.

1st April, morning. 1 oz; 10 minutes after, a small stool followed by a little mucus. Appetite unimpaired. Slight vertigo at about 3 p. m. ameliorated by walking, great reluctance to labor at night. 7 p. m. a second dose of 1 oz: This was immediately followed by an urging to evacuate. Passed a small stool after severe tenesmus; and griping in the stomach during and after meal.

2nd. 8 a. m. ½ oz. Urging to stool after half an hour with pinching pain around the navel. Stool normal. Bearing down during evacuation, the straining is attended with relief.

The pinching pain lasted more or less during the whole day.

3rd & 4th. Pinching pain continues unabated; bearing down gradually disappearing. Bowels constipated. Narrow, moulded stools of a reddish color.

5th. 6 a. m. 1 oz. Vertigo after 5 minutes, obliging me to lie down. Rushing of blood to the head relieved by pressing a pillow against the abdominal walls. This sensation lasted about a quarter of an hour. Constant pinching from 2 to 6 p. m. The pain seems to spread transversely in the stomach. Hard stool at 4 p. m. with slight proctalgia during defecation.

7th, 8th & 9th. No medicine. All the other symptoms are relieved. But the bowels are still costive. Pinching pain continues more or less during the whole day, although slight aggravation takes place at 3 p. m. when the bowels become empty.

11th. 8 a. m. 2 oz. with 2 oz of water. Immediately after taking the medicine, a severe burning was felt in the centre of the epigastrium. This sensation lasted nearly 3 quarters of an hour. The vertigo was instantaneous and so severe that I could hardly stand up without a support. The raising of the head caused everything look dark, and as if everything were turning in a circle (চারিদিক ঘুরিতেছে). Very scanty stool after one hour. The proctalgia was so severe that it prevented defecation. Constant desire to strain, which was attended with drowsiness and desire to sleep even during an evacuation. The bitterness of the mouth did not subside even after taking the meal. Severe thirst during the whole day. Urine, however, was too scanty.

12th. Bowels remained unmoved in the morning. Appetite markedly diminished. Bitter taste in the mouth. Nothing but sour things are palatable. Pinching pain at 2 a. m. obliging me to press a pillow against the walls of the abdomen, but this relieved the pain only from a short period: 6 p. m. a scanty hard stool with severe tormina all over the stomach and abdomen.

13th & 14th. Bowels still costive. Appetite impaired. Pinching continues less severe.

15th to 18th. Nothing worthy of note, except the constipation which is continuing.

19th. 7 a. m. 2½ oz. with an oz of water. Empty eructations smelling of spirit immediately after. Whilst going down stairs I was seized with such a severe giddiness that I had to sit upon the stairs and narrowly escaped a fall. With great difficulty I rose with the assistance of a friend who took me to bed. What next ensued within nearly 3 hours I recollect but faintly. (All this, I fancy, was the effect of alcohol). 10 a. m. no appetite. Took a nominal meal, consisting of milk and rice.

11½ a. m. Scanty diarrhœaic stool with pinching all over the belly.

5 p. m. No appetite even now. Pinching continues every now and then.

20th. Sleep in the latter part of the night was disturbed by dreams of having poisoned myself. From this I woke up unrefreshed. On stooping, a soreness was perceived in the stomach. Passed a scanty reddish, soft stool covered with slime. Urine scanty and of a deep yellow color. Appetite not at all normal. Insipid taste in the mouth. Tongue covered with a thin, tenacious mucus.

21st. Absence of mind. Indisposition to all sorts of work. Constant desire to scrape the tongue with a knife to clear off the mucus which seemed to have accumulated there. Pulse rather full, but not at all accelerated.

Soreness deep in the umbilical region produced by pressing. Stool soft and covered with slime. Urine scanty and deep colored, although unattended with any pain in voiding. Appetite still bad. Even a small meal produces a feeling of satiety. At 3 p. m. the pinching was felt rather severely, but it was of after 10 or 12 minutes. Thirst continues unabated.

22nd. Severe bearing down during an evacuation, although a small stool is voided, with desire for more. Pinching pain in the stomach after an evacuation. Thirst early in the morning, obliging me to drink large quantities. Drinking however brings on a feeling of repletion in the stomach. Diminished secretion of urine even after drinking large quantities of water. Pulse normal. Mind undisturbed.

30th. The constipation and the pinching pains were continuing for ten days unabated, after which the symptoms were relieved by *Nux v.* 6. It must be noted that the system gradually becomes blunt to the action of Kurchi, so that larger quantities could be taken at last with less difficulty than at the commencement of the proving.

The other proving, conducted by Babu Ayodhya Nath Bhattacharyya, Babu Dinabandhu's friend, was still more meagre, owing to the fact of his having taken the drug only for 4 days, and in all but 2 ounces.

The following symptoms were recorded :—

1. Immediately after taking it, eructations smelling of the drug.
2. Sensation of heaviness in the belly.
3. Scanty, hard stool, with much tenesmus.

4. Occasional gripings in the intestines.
5. Impaired appetite.
6. Itching all over the body, expecially in the thighs.
7. Urine more frequent, copious and watery than usual.
8. Feverishness, with aching of the limbs on the 4th day, which compelled him to discontinue the proving.

CLINICAL RECORD.

A Case of Mental Aberration. Recovery.

UNDER CARE OF DR. M. L. SIRCAR.

Moksoda, a Hindu female, aged about 20, resident of Sibpur, was brought to me on the 11th Nov. 1872, for treatment. The symptoms with which she was troubled were the following :—Acidity of the stomach ; vertigo ; palpitations ; involuntary weeping ; dislike for her child, with desire to kill it. The husband told me her disease commenced when she was five months in the family way. At the time she was first brought, the child was one year old and was quite healthy. The first manifestation of her impulse to kill the child was when it was three months old.

I prescribed *Plat.* 6, which she took till the 21st Dec. The improvement was in all her symptoms from the commencement of treatment, was steady, and terminated in complete recovery.

Gleanings from Contemporary Literature.

THE ACTION OF DRUGS.

By WILLIAM SHARP, M.D., F.R.S.

(Continued from p. 156.)

8. *Drugs have been studied empirically.*

And what is *empiricism?* It is a word now so commonly used in an unfavourable sense, as synonymous with quackery, that an explanation is necessary. It was not always so used, nor is it so on the present occasion.

God has endowed us with reason, and has given us five bodily senses. With the former we can study the operations of mind; with the latter we can observe the phenomena of the universe, and upon these observations of our senses we can again exercise our reason.

Reason and sense (or the senses) are not always employed together. Sometimes men speculate upon the outer world mentally, without the foundation of observation - this is reason without sense—*idealism.* Plato is commonly considered the leader of this school.

Sometimes observation is not ignored, but it is kept in subjection to the mind this is reason controlling sense. Aristotle has the reputation of being the father of this method. It teaches us to descend from general principles, thought out by the mind, to particulars observed by the senses; which is a *deduction* of a false kind.

A third method is that of subjecting mental work to observation - which is reason guided by sense. Lord Bacon has the honour of advocating this method. It teaches *induction* of generals, to be arrived at, not suddenly, but step by step from particulars.

Lastly, there is the method of observation alone—sense without reason- - this is *empiricism.*

It may be added that in all these methods there is implied belief. When this is wanting, and there is doubt only, without belief, it is *scepticism.*

Empiricism in medicine has three aspects, one towards doctors, another towards diseases, and another towards drugs.

Empiricism looks at doctors with two expressions; one gracious, and recognising their position, the other scornful, and treating them with contempt. As already remarked, the word is used in this Essay with reference to medical men in its favourable sense. In this sense, to distinguish it from quackery, it has been called methodical empiricism. This is empiricism with a rule or method which implies knowledge; quackery is without rule and without knowledge.

The aspect of empiricism towards diseases is distinguished by the absence of all speculations as to their essence or internal nature. It rejects equally the humoralism of the dogmatists: the pores and fibres of the ancient methodists, and the modern Brunonians; the spasms of Cullen; and the phlegmasies of Broussais; and contents itself with a simple but careful observation of the symptoms, their progress, and their apparent connection with the internal organs of the body.

Empiricism looks at drugs, and stores up the knowledge of them which has been acquired by what is called accident or chance, or by whatever other means. This empirical knowledge of drugs consists of a very large amount of useful-facts, but which are not connected together by any chain of reasoning.

The story of the discovery of the medical virtues of Peruvian bark, whether true or imaginary, illustrates what is meant by the accidental or chance discovery of medicines. The story of the introduction of antimony as a medicine, in the *Currus Triumphalis* of Basil Valentine, is one instance of many for which medical men are indebted to persons outside the profession. For the introduction of iodine, and some others, we are indebted to the direct experiments of physicians.

At different periods of time, a large part of the medical profession has discarded the prevailing hypotheses of the age, and has used nearly all medicines empirically. This is especially the case at the present time.

The student of medical history may well be driven to despair. It is not surprising, though it is very melancholy, to see the greatest historian of medicine of modern times, Kurt Sprengel, end his labourious investigations by becoming a sceptic. Hear his final convictions: --

"The history of medicine shows us that a blind confidence in our opinions is almost always a proof of their falsehood, or of the weakness of the foundation upon which they rest. In studying this history one is persuaded with Pyrrho, that the way to fathom it is to suspend his judgment, and the wisest part is to look upon all opinions with indifference, without adopting any."*

The historian who stands next to Sprengel is the French physician Renouard. His researches have not led him into scepticism but into empiricism. After advocating it with much earnestness at the close of his history, he concludes with these words:—

"This system, it is true, takes from the mind many illusions which flatter our vanity, but which are obstacles to progress. Although the world grows older, man remains a child whom fictions amuse. But in a science like medicine fictions are never innocent; they have always caused much evil, and have retarded the progress of light much more than doubt and ignorance."†

I have said that empiricism is sense without reason. This is true in one respect but not in another. It is true with reference to what had been said just before of the dogmatism and methodism of the ancients; and is also true with reference to the moderns who base their systems of medicine upon the laws of physiology. Such physicians, whether ancient or modern, think they ought to know the nature of diseases, the physiological disturbance, and to reason out upon this knowledge a method of treatment. The empiric argues that this is a great mistake. "All such reasoning, though it appears just and natural, is only a subtle sophism, which clinical experience contradicts at every step. There is a crowd of diseases whose nature escapes our researches yet which we know how to cure, and there are others whose mode of formation is better known to us, whose treatment is, nevertheless, little improved by that knowledge."*

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* Kurt Sprengel. Introduction.

† Renouard. Conclusion.

Empiricism, then, rests upon the observation of the senses, and rejects all elaborate reasonings upon the nature of diseases and the action of remedies. In this respect empiricism is sense without reason.

In another respect, however, it is not without reason; for it has framed for itself, from the observation of the senses, an axiom or rule by which it is guided. And the rule is this :—

"Those remedies which have cured one case of disease will cure all cases analogous to it." Or,

"Diseases must be treated by remedies which have been experimentally recognised as the most efficacious."†

Empiricism was first raised to a high position in the school of Alexandria, and it retained an honourable distinction till the time of Galen. But its fall was complete then, and its name became an epithet of reproach for fifteen hundred years. It was the produce of rare intelligence and great labour, but it had two fatal defects : one, the want of a chain to connect its numerous but isolated facts ; the other, the absence of an element of progress ; for it possessed no means whereby new remedies could be discovered, and the treatment of disease be made more successful. In this way its ruin became inevitable.

Modern empiricism must share the same fate. Its many facts are like a handful of separate grains which the first shake will scatter to the winds. They are unstrung beads which are easily lost ; and there are no effectual means either of gathering them up or of adding to their number.

This latter defect, the want of some means of discovering new remedies, is honestly confessed by the most strenuous advocates of empiricism. Renouard, after having demolished all other systems, and deliberately taken refuge in empiricism, has this remarkable passage :—

"It must be avowed that the fundmental axiom of empiricism does not furnish any light to direct us in such researches ; *it does not at all indicate the route to follow for the discovery of curative means.*"

This surely is to pronounce its condemnation. A system which must for ever stand still, and that in the face of manifest and daily failures, without adequate means of improvement, cannot be accepted as the final system of medicine.

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* Renouard.

† Ibid.

We have now seen that the grand medical systems of the ancients, the Dogmatism of Galen, the Methodism of Themison, and Empiricism of Serapio were either michievously erroneous or fatally defective. Modern systems, which are, for the most part, physiological doctrines, do not offer much truer satisfaction, or much greater success. So that Empiricism is again prevalent, notwithstanding its acknowledged deficiencies.

Empiricism collects the assemblage or totality of symptoms, prescribes some remedy already known, and falls to pieces from vagueness ; from the too great multiplication of details ; from the want of a cement to bind the details together and to make them manageable ; and from the absence of any definite means of improvement, or of making the addition of new remedies.

The general conclusion from this rapid sketch of medical history, and the lesson to be learned from it, seems to be this: that reason and the senses are twin hand maids, whose office it is to guide man into the knowledge of natural truth ; and that they must be allowed the previleges claimed by each. If a partiality be shown to either, the consequences are ruinous : if to reason, by being led into error ; if to the senses, by the arrest of progress.

Let us now for a moment, before passing on to the next part of the subject, look at Hahnemann's Homœopathy in the light which we have derived from medical history.

It is evident that Hahnemann's system is another form of empiricism ; inasmuch as he limits himself to collecting the totality of the symptoms, both of diseases and of drugs.

Instead of the rule of past experience, he adopts that of resemblances – similar symptoms of drug and disease.

It has one great advantage over all other forms of empiricism : it possesses the means of adding new remedies, by the proving of drugs in health. This is a glorious gain.

But it is not freed from the other great defect of empiricism ; for the system is made to rest upon the observation of symptoms only. Unless some chain of reasoning can be found, by which the details, as so many separate links, can be united together, it must expect the fate of other forms of empiricism, and fall to pieces from its very progress ; that is, from the accumulation of an unmanageable amount of detached facts.

Homœopathy, indeed, is already becoming cumbrous and vague in this manner. The numbers of cases and of provings are now so vast that, like a hand too full of beads, they must be scattered and lost for want of a binding string.

But if, by some successful effort of reason, a thread can be discovered, by which these beads can be strung together, permanency may be safely predicted for it.

Physiology and pathology have been pressed into this service, but without success. The thread I have proposed is not a physiological, nor a pathological, but an *anatomical* one. The *seat* of the symptoms generally admits of being observed almost as clearly as the symptoms themselves; and what reason has to do is to connect the two observations together. This union becomes the thread which will preserve the symptoms, like so many single beads, from dispersion and oblivion.

It will sometimes be found that the same symptom belongs, in different cases, to different organs; and the precision and success of treatment will depend upon the organ which is its true seat in each case being carefully ascertained.

For example, palpitation, besides belonging to the heart, as it may do in the majority of cases, in others may have its origin in the brain, in the stomach, in the uterus, or in the muscles. Cough may have its cause in the stomach, or in the uterus, as well as in the various parts of the respiratory organs. It is well known that pain in the right shoulder-blade sometimes belongs to the liver; and that pain in the knee is sometimes caused by disease in the hip-joint.

But if we take anatomy for a basis, instead of physiology or pathology; if we study the organs of the body, and attach to each organ the symptoms of diseases and also the symptoms of drugs which belong to it; we shall unite diseases and their remedies together, as so many links, in a golden chain; and this system of medicine will remain, and be permanently useful.

9. *Drugs have been studied mainly for their indirect action.*

The indirect method of treatment has been a prevailing error from the earliest times that reasoning has been applied to medicine. It embraces a large part of the practice of physic of the present day.

This subject was dicussed in a previous Essay, the title of which is *The Single Medicine,* and which was first published in 1857. In the same year the late Sir John Forbes published his interesting but to his own school most discouraging book, *Of Nature and Art in the Cure of Disease,* which he calls "the legacy left by him to his younger brethren after fifty years of practice."

In this book Sir John Forbes delivers his judgment of homœopathy in these words; first in regard to infinitesimal doses: –

"The Homœopathic remedies, so called, are utterly inert, and incapable of influencing the body, in any of its organs or functions, whether in health or disease. This is to me a demonstrated fact."

Secondly, in regard to its principle :—

"If it should repudiate this doctrine [the use of the infinitesimal dose] it must then be taken out of its present category, and placed under the head of empirical and pseudo-specific treatment of the lowest and worst kinds."

After this it will not be suspected that he and I had had any previous communications on the subject on which we were both, unknown to each other, engaged. Indeed, it was not until some years afterwards that I saw and read his book.

Probably many of my readers are familiar with the book ; if not, it may be respectfully suggested that the three concluding chapters (x.,xi., and xii.) well deserve a careful study. I dare not occupy much time in giving extracts from them, but must beg leave to produce one or two. In the opening of the tenth chapter we read thus :—

"They [medicines] would seem all capable of being arranged in two main classes, according to the more or less direct way in which they influence the morbid state.

"In the first class we would comprehend all those means which, in producing their effects, act or are supposed to act directly on the disease itself, or on the disordered parts and functions constituting it, or on its immediate and still persistent cause, and which may therefore be called *Direct means.*

"In the second class we place all the remaining means, those, namely, which, possessing no special relation with the morbid state itself, act on it merely in an indirect or vicarious manner, by modifying some other organs or functions or the system generally, and so influencing the disease. These may therefore be named *Indirect means.*"

After a careful examination of these two classes of means, the conclusion is thus expressed :—

"In only a very minute proportion of the numerous diseases presented to us in practice—and these few, for the most part, of slight importance—are we able to act positively or certainly, that is directly or specifically, on the diseased part, or on its morbid condition : while the whole huge remainder of diseases can, as we have seen, be only indirectly, and distantly and slightly touched by our agents in any case,—and in a large proportion of cases, cannot be touched at all. ......"

"From the survey in the last chapter, it appears that, with the exception of a very few, and those comparatively insignificant diseases, the Medical Art does not possess the power of curing diseases in a direct and positive manner. In the few diseases in which it may be said to do so speaking generally, it not seldom fails to do so in individual instances.

"In all other cases—that is, in the vast majority of diseases—the Medical Art, even when exerting its powers most successfully, can, in strict language, hardly be said to *cure* diseases at all. All that it professes to do, and all that it does, is to influence diseases in an indirect and partial or imperfect manner, by modifying, to a greater or less extent, the functions of certain organs, with the view and in the hope of thus modifying the processes in which the malady consists."

"The degree to which the Medical Art can fulfil even this humble office, we have seen to be infinitely less, generally speaking, than the public and even than the members of the medical profession have always believed, and still believe."

It was necessary and fair, after this overwhelming condemnation, to insert a saving clause, and it is added in these words :—

"The Medical Art, when it condescends to leave its imaginary heights of power, and take up its true position as a helper in man's infirmities, proves itself to be not simply useful, but most valuable in almost every case of disease, slight or severe, curable or incurable. ……. Nature can almost always be helped, in some slight degree at least, either negatively or positively, if not in both ways, by those who possess the necessary knowledge and skill."

In this farewell testimony of Sir John Forbes we have, first, his condemnation of homœopathy; and then, as the final result of a very long practice, in which great abilities, industry, and opportunities were united, we have his frank confession of the general prevelence of the indirect method of treating diseases, and of its painful inefficacy. A condemnation of his own school of medicine scarcely less severe than that of homœopathy. Why do we respect his judgment in the one case, and not in the other? Because he was competent to condemn the system with which he was practically acquainted: and was not competent to condemn homœopathy, of which he had no practical knowledge.

When a patient has been examined by a physician, and the symptoms have been observed and noted, they are viewed in three aspects. One is for the purpose of forming an opinion of the seat and nature of the disease—for diagnosis. Another is to judge of its probable progress and termination—for prognosis. The last is for treatment. All the symptoms are not of equal value in each of these points of view; some tell the seat and nature of the disease better than others; some guide the prognostications; and some give what are called the indications of treatment. It is with the indications of treatment that we have now to do. These indications, according to long prevailing notions, are many and diverse. They are nearly all embraced by two thoughts—elimination and counter-irritation.

As regards the first—elimination,—turning the complaint out of doors—the indications supposed to be supplied by the symptoms are many; for example, the practitioner sees in the case before him what suggests to him reasons for bleeding; or for purging or for emetics; or for diaphoretics; to produce perspiration; or for diuretics to act on the kidneys; or for anodynes or soporifics, drugs possessing the sleepy property, the fashionble one just now being *chloral hydrate.*

It will be noticed that none of these indications suggest a *direct* cure of the malady, but the production of some effect, commonly a discharge or increase of some secretion, which it is presumed will, *indirectly* mitigate the force of the disease.

The other thought is revulsion or counter-irritation. This contemplates acting on healthy parts with the intention of relieving, in this *indirect* way, the diseased parts. For example, a congestion of the brain immediately suggests to the physician that the healthy bowels must be irritated with purgative such as colocynth or gamboge (see these drugs in Pereira's *Materia Medica)*; the healthy skin must be inflamed by a blister; the healthy kidneys must be set to do increased work; and so on. An artificial disease being thus necessarily added to the natural one.

The medical profession since the times of Hippocrates has been so indoctrinated with these notions of eliminating the essence of the disease by driving it out in some discharge, or of frightening it away by the perturbative practice of counter-irritation, that it has always been with extreme difficulty that any remedy could be introduced which offered to cure a patient in a less offensive manner.

Edouard, when describing the introduction of cinchona, tartar-emetic (at one time proscribed by a decree of the Parliament of Paris), ipecacuanha, belladonna, digitalis, vaccination, &c., has a very vigorous passage on this point. He says :—

"An important remark on the subject of all these beautiful improvements remains still to be made, which is, that they were all accomplished, not in virtue of prevailing theories, but in spite of them ; but the greatest obstacles they had to surmount to become established, came from these very theories. What was the reproach that the adversaries of cinchona brought against that medicine ? It was this, that it produced no sensible evacuation. In their opinion, founded on the authority of Galen and others, the proximate cause of intermittent fevers could be nothing else than vitiated bile or phlegm ; so that a medicine which expelled neither the bile nor the phlegm, could not, according to their doctrine, cure an attack of ague."*

Many excellent remedies, which exert no power but the power of healing, have passed, mainly through the hands of homœopathists, into general use. And yet, so inveterate is the habit of inventing hypothetical explanations, that medical men will not acknowledge this power of healing simply as a fact. They will use terms which imply an explanation of the manner in which this power is exerted. Indeed, hypotheses and their invention are nothing less than a medical mania.

Take, as an example, the following paragraph about copper, from Pereira :—

"If the cupreous preparations be used in *very small doses*, they sometimes give relief in certain diseases, without obviously disordering the functions ; in other words, in these instances the only apparent effect is the modification observed in the morbid condition. These are the cases in which these preparations have been termed *tonic*, *antispasmodic*, or *alterative*, according *to the nature of the disease* ; thus, in ague they have been termed tonic, in epilepsy antispasmodic, in dropsy alterative."†

And so the tonic property, the antispasmodic property, the alterative poperty and why not all other properties ?—reside, not in the drugs, but in the diseases ! Such reasoning as this ought to require no refutation.

The conclusion seems to be irresistible that this indirect method of using drugs as remedies must be abandoned, and a better method must be sought for.—*Monthly Homœopathic Review*, April 1, 1873.

(To be continued.)

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* Edouard's *History*, Reform Period, Ch. V.

† Pereira's *Materia Medica*, Vol. I., page 869. 4th Edition.

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THE MATERIA MEDICA.

29.—CHELIDONIUM MAJUS (Contd.)

Catalogue of Symptoms.

I HAVE not admitted the symptoms derived from observations on the sick, nor those extracted by Hahnemann out of Horn's *Archiv.*

I thought I ought to exclude the symptoms given by Trinks (*Handbuch der Hom. Arz.* 1847, p. 488). "Vertigo with nausea and phantasies in a half waking half dreaming state" (from Kneschke's *Summarium*, 1836, p. 217), because they occurred after taking a mixture of *Extr. Taraxaci*, *Chelid.*, *Sal amar.*, and *Aq. Menthæ pip.*, so that it is impossible to determine what share the rest of the mixture had in the symptoms.

No more have I inserted the symptoms recorded in the *Hygea (Neue Folge*, 1 Bd., 2 Heft. *Excerpt aus Journal d. l. m. Hom.*, Mai, 1847) of a man who, in order to prevent the attack of a prevalent typhoid fever, had taken a decoction of *Chelid.*; for I considered that the sufferings which Dr. Cumyn there records at the commencement of the medication, as symptoms of a slight bilious fever, show in the sequel that they were a positive disease.

As regards the Vienna provings I could not procure a copy of the detailed provings recorded in the organ of the Society; and therefore am only able to borrow the symptoms from the scanty abstract printed in the Society's journal. The tincture prepared from the fresh juice was proved from the 19th to 30th of June, 1844. The provers took daily a dose beginning with 5 drops, and increasing gradually to 200. The "*Extr. aquos.* and *spirituos.*" were also proved.

Schneller endeavours to attain by the provings an insight into the *modus operandi* of the medicines upon definite organs and systems, but hardly promises himself practical advantage therefrom, and says it is going too far to look for salvation only in the minute observation of the healthy organism during medicinal provings, and to draw our therapeutic conclusions exclusively from the *Materia Medica Pura.*

Obs. If Schneller had informed himself more precisely on the subject of homœopathy, he would have learnt that homœopaths too attach great importance to the clinical test, and that it was there they first learnt that they were upon the best and shortest road to success. But the *colossal error* into which men have fallen by *mere observation of the therapeutic action without the guidance of physiological experiment,* shall be pointed out below. When Schneller further says, "However, in order to obtain a hint for the treatment of such diseases, especially when chronic, as have hitherto resisted so many attempts at cure, the medicinal provings on healthy persons are not quite useless, for this very reason, that by them we can learn many local specifics." Evidently herein is implied a recognition of the Homœopathic therapeutic principle. We also, like him, learn by the provings to know the point of attack of the medicine; but we hold a more minute observation than he approves of to be incumbent on us for that purpose.

The abstract presented to us is unfortunately not calculated to forward our *Materia Medica* much, malgré the eleven provers.

We have before us a preliminary account of the performances of the proving committee, an abstract of the symptoms obtained by Schneller (especially on himself), and then a summary by Flechner amongst the contributions to the physiology of the action of the medicine. In this last account, many symptoms are wanting which are given in the first. Only those are given which were considered important for judging of the medicine, which are often, however, so grouped that it is impossible for us to construct from them an *exact* picture, in order to decide upon the action of the medicine; when, for instance, we read, "Pressure or transient pains in the orbital region, the muscles of the forehead, the cheek bones and teeth, under the skull, and even inside the brain."

Besides, the symptoms observed by individual provers are only given exceptionally. From the eleven days' provings of the eleven provers, the conclusion is drawn that *Chelid.* acts neither on the circulating nor the portal system. But would not such action seem to be indicated by such symptoms as the following: "Increased warmth, burning and redness in the face, papular exanthema on a red base, redness and swelling of the uvula and tonsils?" and again, "turbid brownish or greenish urine?" I have not introduced into my catalogue the symptoms from the proving with the extract. A special instance of symptoms from the watery extract which were not observed after taking the tincture is "Tension of the membrana tympani, and exaltation of the hearing," and from the spirituous extract, "salt after taste, taste of copper, vomiting after each dose, eructation with after taste of cod-liver oil, redness and swelling of the uvula and tonsils for thirty-six hours."

The last symptom seems to me worthy of notice, because it may easily be overlooked by other provers, and it also appears amongst the symptoms of disease cured by *Chelid.* The symptoms repeatedly observed are printed in small capitals; those printed in italics are symptoms which have also been *cured* by *Chelid.* For the sake of retaining symptoms in their natural association, I have departed from the customary order now and then.

Where provers have previously suffered from symptoms similar to those produced by the medicine, this fact is especially noticed.

When only a part of the recorded symptoms is printed in small capitals, then that part refers to the several provers named just after, in order to facilitate the inspection of the symptoms.

EXPLANATION OF THE LETTERS.

a. To denote previous provers.

R. A. Hahnemann's *Reine Arzneimittellehre*, ed. 2d, 1825.

Sch. Dr. Schönke (*Practische Mittheilungen der correspondirenden Gesellschaft hom. Aerzte*, 1827, p. 5—7).

Ng. Nenning (Hartlaub and Trinks, r. A. m. d. 1 Band, 1828, 2 Band, 1838.)

Lk. Dr. Liedbeck, Stockholm (*Allg. Hom. Zeitung*, Bd. 45, S. 26, &c.)

Le. Dr. J. Lembke, Riga (*Allg.* H. *Z.*, Bd. 45, S. 26, &c.)

T. Dr. Teste, Paris (from *Systematisation pratique de matière méd. hom.*, Paris, 1853.)

W. Pr. Doctors Flechner, Haller, Herzog, Hummel, Kluky, Kron, Moos, Schneller, Wotzelka (*Zeitschrift der k. k. Gesellschaft der Aerzte zu Wien*; Bericht von Dr. Kluky in *Jahrgang*, I, Bd. 2, 1845, xv, xvi). Dr. Schneller im *Jahrgang* II, Bd. 2, 1846, S. 405; Dr. Anton Flechner, im *Jahrgang* IV, Bd. 1, 1847, S. 174.

b. To denote the provers obtained by the author.

A.H. Miss Auguste Hamann.
A.X. The author's son, Adolph.
F.R. Mrs. Richter, wife of the private secretary.
F.S. Mrs. Serjeant-major Sinder.
F.X. The author's wife.
Gs. Pastor Gueinzius.
H. Pastor Hamann.
Hs. Mr. Hermes, teacher.
K. Miss Kranke.
Kch. Mr. Koch, hotel-keeper.
L. Mr. Laudahn.
N. Mrs. N—, of N.
P. Mr. Patze, secretary of the department.
Rr. Mr. Richter, private secretary.
R.X. Reinhard, the author's son.
S. Serjeant-major Sinder.
W. Mr. Theodore Wisch.
X. The author.

Generalities :—

. Apoplectic insensibility and benumbed feeling of the whole body, with trembling, the pulse being unaltered. R.A.

. WEARINESS AND INDOLENCE OF THE LIMBS. R.A., X., L., K, Kch., F. X.

. It is impossible for him to move a limb quickly; with yawning and sleepiness. R. A.

. AFTER FOOD VERY *great distaste for work, and laziness with sleepiness.* R. A., X., Rr., F. Rr.

5. *Great distaste for mental occupation.* W. Pr.

. GREAT DISCOMFORT; HE IS NOT AT ALL WELL, WITHOUT KNOWING WHAT EXACTLY AILS HIM. R. A. (in ½ h.), Ng., (in 1½h.), X.

. HE IS OBLIGED TO LIE DOWN, YET CANNOT SLEEP, and finds everything intolerable. R. A., X.

. A DISPOSITION TO LIE DOWN without being sleepy, or able to sleep. R. A., F. Rr.

. INVINCIBLE DISLIKE TO MOVING (in 6 h.). T., Rr.

10. *Prostration, exhaustion and languor.* T., X., Kch., (in 2½ h.). F. X.

. Languid, lazy, and prostrate, with yawning. Afternoon 2 o'clock. Ng.

. Languid on walking in the open air; when sitting, he only feels languid in the legs (in ½ h.). Ng.

. *Weakness in walking.* X.

. Relaxation of the whole body. F. S.

15. WEARINESS and *exhaustion of all the limbs,* AS IF AFTER A LONG WALK. Rr.

. Great exhaustion of the whole body, as if after severe illness. Rr.

. Lazy, prostrate and sleepy; all this goes off in the open air (in 1½ hour). Ng.

. *Languor and listlessness.* W. Pr.

. LANGUOR AS IF HE COULD NOT STAND UP (in ½ hour). F.S., K.

20. *Feeling ill, as if with influenza.* X.

. You can't get him to sit or lie down, he must be constantly carried (a child). R. X.

. General stupefaction and somnolence (in 6 hours). T.

. Anguish and oppression (immediately after taking it). X.

. Apathy. T.

25. *Loss of consciousness.* R. A.

. Long continued fainting with cold extremities (in 6 hours). F. X.

. Comfortable feeling of health and internal strength (5th day after the last dose). Rr.

. In the evening actively disposed. Ng.

. SLIGHT RHEUMATIC PAINS IN THE NAPE, SHOULDERS, AND ARMS. T., Hs.

30. Afternoon; the wandering pains are more on the left side. Hs.

. *Drawing pains through the whole body* (in 1½ hour). X., L., F. X., Kch., F. S.

. Drawing pains through the muscles of the chest, as far as the umbilical region. X.

. *Wandering pains* in the joints *of the extremities,* especially on the left side (generally only when resting); also in the forehead, the sides of the nose, and upper jaw-bones. L.

. Shooting pains first in the arms, then legs; also in the sacrum, with heat in the cheeks. F. S.

35. He cries as soon as any one moves his left leg or touches his left side (a child). R. X.

. Congestion of blood to the head, throat, and lungs. T.

. Feeling of numbness of the muscles in the region of the liver, and in the muscles of the head, throat, and face on the right. T.

. Trembling of the head and hands (in 4 hours). T.

. Trembling of the limbs. T., F. S.

40. Trembling of the hand in writing (for 4 days). X.

. Trembling of the upper extremities. F. X.

. TREMBLING ALL OVER, with faintness, nausea, and anxiety. F. X., Rr.

. On awaking, slight *twitching in the muscles here and there.* X., F. S.

. Twitching in all the limbs, with great anxiety. Kch.

45. *Twitching in arms and legs,* and in the head on moving the arm. F. X. (See also "Extremities.")

. Staggering gait. F. S.

. INCLINATION TO MOVE AND CHANGE HIS PLACE. R. A., T.

. SUDDEN RESTLESSNESS OF ALL THE LIMBS, COMPELLING HER TO MOVE; she cannot stand still, and on trying to do so steps with her feet. She must move her arms. F. X.

. She must get up instantly and walk about, could not sit still for all the world; on trying to do so she raises her legs involuntarily. F. X.

50. She involuntarily grasps her arms with her hands and presses her hands together. F. X.

. After having for a few minutes been obliged to walk about, the fit passes off; while it lasted, she could not prevail upon herself to speak of her condition. F. X.

. *Great emaciation, with total loss of appetite.* F. X.

. AFTER DINNER THE SUFFERINGS PASS OFF FOR 2 OR 3 HOURS. X., A. X., F. X.

. AFTER EATING ANYTHING ACID FOR DINNER, THE SYMPTOMS USUAL AT OTHER TIMES KEEP AWAY. Kch.

55. Anxiety, vertigo, and heat of the head drive her into the fresh air, where she feels better. F. X.

. Comfortable feel by keeping the room very warm. F. X.

. After being quite well for 5 days the sufferings return on the commencement of chilly weather. X.

. Rapid change of weather aggravates the symptoms. F. X.

Mind:—

1. *The Spirits.*

. *a. Exaltation.*

. UNUSUALLY CHEERFUL SPIRITS. R.A., X., H., Hs., S., Sch., Rr., F. S.

60. Great calmness of spirits and cheerfulness (the 2nd day), T.
. *b. Depression.*
. EXTRAORDINARY DEJECTION; FULL OF SAD THOUGHTS about the present and future, even to weeping. R. A., P.
. *She thinks she must die* (6 hours after the medicine). F. X.
. She would like to die. F. X.
. SHE IS IN A SORROWFUL MOOD, and dreads losing her health by the proving. F. X., K., F. S., P.
. *c. A mixture of exaltation and depression.*
65. DISINCLINATION TO SPEAK. Hs., Rr., P.
. IRRITABLE TEMPER, with inclination to weep (the 5th day). F. X., Rr., Hs., P., N.
. ILL HUMOUR. T., Rr.
. *Restlessness and uneasy conscience, as if she had committed a great crime and could find rest nowhere;* and as if she must run away (in 2½ hours). F. X., F. S.
. Terror at the least noise as if he had a bad conscience, and could not but fear. Kch.
70. She gets up full of anxiety, and tears the clothes from her neck and breast (in 6 hours). F. X.

2. *Intellect.*

. Great tendency to talk much in company for several weeks. H.
. *Distraction and forgetfulness.* X.
. *Difficulty of thinking.* Rr.
. She believes she cannot think, and *is losing her senses* (in 2½ hours). F.X.
75. *Thinking becomes difficult to her, and she easily forgets what she wants to do or has done.* N.

3. *The Will.*

. VEXATION AT EVERY TRIFLE, AND VIOLENT OUTBREAKS OF PASSION. F. X., Kch.
. For a whole week temper much excited, and daily fits of passion. F. X.
. She longs to beat the children, and trembles with passion that she has no excuse for doing so. F. X.
. TEMPER INCLINED TO ANGER AND VEXATION. Rr., Kch.
80. QUARRELSOME MOOD. Kch., N.

Sleep :—

1. *Sleepiness in the day-time*

. *Sleepy condition.* W. Pr.
. *Lethargy in the day time.* T.
. GREAT WEARINESS AND SLEEPINESS ON AWAKING IN THE MORNING. R. A., X., F. X., Rr., Kch.
. Yawning, as if not having slept enough (in ½ hour). Ng.
85. SLEEPINESS WITH YAWNING, AND STRETCHING, and languor, as if after sitting up all night. Rr., F., Rr., N.

. UNUSUAL SLEEPINESS TOWARDS EVENING. Hs., S.

. Weary, yet unable to sleep. P.

. GREAT WEARINESS, WITH FREQUENT YAWNING. F. X., A. X.

. His eyes close from sleepiness (in 1½ hour). Ng.

90. *She falls asleep as she sits.* F. X.

. She sleeps when in the hot fit, but when the chill commences she always awakes. F. X.

. Towards evening her eyes close after sitting down. F. X.

. Unconquerable sleepiness at 3 p.m. F. X.

. Unconquerable weariness, followed by sound sleep till ½-past 3. Rr.

95. A long sleep at noon. X.

. When awakened she falls asleep again directly. F. X.

. FREQUENT YAWNING and stretching. X., S., F. S.

. Wandering of thoughts, as if when half asleep (in 6 hours, and lasting 1 hour). T.

. Violent pain in the head, after starting in terror out of a siesta. R. A.

2. *Disturbed sleep at night.*

100. No sleep all day (a child). R. X.

. Screaming all night, especially on being handled (a child). R. X.

. From 10 till midnight, *phantasies in a half waking state without meaning or connection*, and images of death and soldiering. Kch.

. *Restless sleep, full of dreams* R. A., P., Rr., W. Pr.

. RESTLESS SLEEP, WITHOUT ANY PARTICULAR DREAMS. R.A., T., Kch.

105. Directly after the medicine, towards midnight, his weariness goes off, so that he cannot get to sleep. X.

. *She cannot get to sleep for a long time*, then sleeps well. Ng.

. She awakes several times before midnight; after that sleeps quietly (the 1st day). Ng.

. *Restless sleep till midnight.* Kch.

. Frequently *in the evening in bed, restlessness and excitement till towards midnight preventing sleep.* S.

110. *She cannot get to sleep for a sensation of numbness and coldness in the lower extremities.* F. X.

. Sudden awaking with pressive headache. X.

. UNWONTED AWAKING TOWARDS 4 A.M., FROM VARIOUS SUFFERINGS. X.

. STARTLED OUT OF SLEEP WITH VIOLENT PAIN IN THE TEETH. X., F. X.

. REPEATED AWAKING, WITH CONFUSION. F. X.

115. Awakened by short cough. F. X.

3. *Dreams.*

. Many dreams (1st night). Ng.

. DISTRESSING DREAMS. S., Rr.

. Sleep, with dreams of the daily business. R. A.

. DEEP SLEEP WITHOUT DREAMS. T., Rr.

120. CONFUSED DREAMS X., F. X., K., S.

. *On awaking he cannot remember what he has dreamt.* X., F. X., K., T., Rr., S.

. Very particular DREAM OF A JOURNEY, of which, on awaking, he remembers the most minute particulars. F. X., S.

. DREAMS OF CORPSES AND BURIALS. Rr., F. X., X., Kch., F.S.

. A dream of a combat with a naked corpse springing up upon him, which makes him gasp. X.

125. He awakes from a dream that he was going to be shot. S.

. He weeps aloud during a dream that he must enlist as a soldier. Kch.

. A Voluptuous dream (the 2nd night). Ng.

. Dream of a procession and music. F.S.

A dream that she found great lice upon her shoulder, and a long meditation afterwards where they came from. Ng.

Fever :—

1. *Chill.*

130. Transient shuddering all over the body (in $\frac{3}{4}$ hour). Ng.

. *Cold shuddering* T. (in $1\frac{1}{2}$ hour), X., F. S.

. SHUDDERING ALL OVER, WITHOUT CHANGE OF TEMPERATURE OR THIRST (in 3 hours). R. A., X.

. Cold shuddering all over, whereupon the confusion of the head ceases (in $1\frac{1}{2}$ hour). X.

. Cold shudder, as if cold water were thrown over him. F. X.

135. Chill and *shuddering on awaking* in the night. F. X.

. *Chill.* L., H., F.X., Kch.

. Chill and feeling of cold all over. K.

. DIMINISHED TEMPERATURE OVER THE WHOLE BODY. R. A., F. X.

. COLD FEEL ALL OVER, without diminution of temperature. F. X., Gs.

140. Drinking water causes unusual cold. Gs.

. For two hours general cold, with pain in the right side of the face. Hs.

. COLD ALL OVER, *especially in hands and feet.* Ng., Sch., F. X., Hs.

. Chilliness. X., F. X., G. S., S.

. *Chill with cold feet,* in the morning on awaking. A. H.

145. Chill, internal and external, with weight in the occiput, and drawing in the nape. Rr.

. CHILLY RIGOR, WITH CHATTERING OF THE TEETH. Rr., Hs., S.

. Chilly rigor every time he goes into the open air, without cold, ceasing in the room (lasting 2 days). R.A.

. Chilly rigor, with eructation, but no nausea (in $\frac{1}{4}$ hour). R. A.

150. *Chilly rigor towards evening* FOR SOME MINUTES. F. X., Hs., X.

. Fits of chill, with nausea, for two evenings successively; chest much oppressed; numbing pain in the crown and left temple. N.

2. *Heat.*

. *Increased heat all over, especially in the face.* F.X.,A.H.,X.P.

. Agreeable warmth all over, p.m., with fuller pulse (for the 3rd and 4th days). Hs.

. INCREASED FEEL OF HEAT ALL OVER, with pulse 90 (the 4th day). X.

. Pulse 68, 5 p.m. Ng.

155. Increased temperature all over, especially in the hollow of the hands, from whence the heat seems to proceed; not in the feet, 5 p.m. Ng.

. Feel of great internal heat of the body with rather moist forehead, 4 p.m. Ng.

. Increased heat all day, chiefly in the soles of the feet when she perspires, with cold skin (the 2nd morning). Ng.

. Great heat, but only internal, all over the body (1 p.m.). Ng.

. FEELING OF HEAT ALL OVER, especially in the hands and face. H.,K.

160. Much dry heat all over, with full pulse (83), and thirst. T.

. *Heat without thirst after lying down in the evening* (the 3rd day). Ng.

. Heat all over, with restlessness and a paralytic feeling in the legs almost all day. S.

. Heat mounts up into her head, then warmth all over the body, with distention of the veins in the hands (in $\frac{1}{2}$ an hour). Ng.

. *Glowing heat in the head*, with sharply defind darkish redness of the cheeks; pulsation in the ARTERIES, *full pulse (at 90), faintness, difficulty of speech, nausea, short breath, and cold feet* (in $1\frac{1}{2}$ hour). F.X.

165. After one dose about 1.30 p.m., for 4 days in succession, from 3 o'clock, general dry heat with strong full pulse (110 to 120), and some thirst, the first day for 2 hours, each following day $\frac{1}{2}$ hour less, with oppressed chest and pressure on the stomach, burning pain in the cheek bones and teeth, close over the right eye, and in the occiput. S.

3. *Alternation of heat and cold*

. Heat and cold by turns, with thirst for sweet beer. K.

. *Rigor in the evening* for $\frac{1}{4}$ hour, with chattering teeth and rigor, as if cold water were poured over him. *Thereafter, great heat*, especially all over the head, with red puffy. face and thirst for $\frac{1}{2}$ hour. *Thereafter, oppressed chest and difficulty of breathing* (in 44 hours). F.X.

. At 2 p.m. chill, as if from a sousing with icy-cold water, with dry heat alternating, especially in the face; cold feet, languor and paralysis of the limbs. F.X.

. At 4 p.m. chilliness for $\frac{1}{4}$ hour, then heat, chiefly in the head, with cold of the legs for 2 hours; languor and exhaustion from the least exertion for 4 days continuously (the 5th day). F.X.

4. *Perspiration.*

170. *Early perspiration.* R.A., X., F.X., K., Hs., P., Kch., F.S. (2 mornings), Ng.

. Itching in the region of the hip as if perspiration would break out there. F.

. Feeling as if perspiration were breaking out on the forehead, with anxiety. F.X.

. *Perspiration at night* on awaking, especially in the palms of the hands. X.

. Perspiration on the forehead and hands, with spasmodic pain in the right kidney and in the liver. F.X.

175. After a gentle general perspiration in the morning, the swelling of the extremities ceased. F.X.

5. *Chill and perspiration.*

. When lying in bed at night, *a rigor* comes over him, *lasting nearly an hour,* with external warmth all over, yet with goose skin; *then follows perspiration for the whole night* (in 38 hours). R.A.

6. *Heat with perspiration.*

. *Heat inside and out, with warm perspiration* on the face, neck, and chest; vertigo and nausea. Rr.

. On awaking in the morning, general increase of temperature, with copious perspiration. A.H.

7. *Pulse* (without other fever symptoms).

. Pulse much quicker than usual, small, not compressible. T

180. Pulse 62, full and hard (in 1½ hour). Ng.

. Pulse after fainting, 50, at unequal intervals with cold all over (in 6 hours). F.X.

. Pulse 50, after previous palpitation of the heart with cold pale face. F.X.

Skin :—

(See also Scalp, Face, Scrotum, and Extremities.)

1. *Sensations.*

. Burning and itching on a spot of the right hand scratched by a thorn. X.

. ITCHING ON THE SKIN HERE AND THERE, especially on the back, arms, and legs. P.Kch.

185. He scratched his arms and legs quite raw from itching. P.

. Itching of the right side of the neck, passing off after scratching, but returning afterwards (in 1½ hour). Ng.

. Itching burning, close under the pit of the neck. X.

. Skin as if bruised all over the chest and throat. T.

. A burning patch four fingers broad under the left clavicle, and similar burning patches on the upper part of the body (3rd day). T.

190. SOME FLYING STITCHES, AS FROM NEEDLES, VARYING FROM PLACE TO PLACE. R.A.,Hs.

2. *Eruptions.*

. Some red pimples with white heads on both thighs, with biting corrosive itching. R.A.
. Pimples like pocks on the back of the right nates with red areola. F.X.
. ISOLATED LITTLE PIMPLES ON THE BACK AND LOINS. X.,P.
. Scattered indolent red pimples. T.
195. Pustules on the bosom (12th day). F.X.
. Eruption of the face like miliary rash and measles. F.X.
. Eczema on the scrotum. R.X.
. After a burning on the previous day, four fingers' breadth below the left clavicle, a herpetic spot came there (3rd day). T.
. *Red, round* burning *spots on the forearm, of the size of a sixpence.* T.
200. Inconspicuous spot between the breasts. T.
. Reticulated red, itching corroding spots, with swelling on the back of the left hand, which discharges itself. (Eruption returning after 16 years). Rr.

3. *Temperature.*

. *Dry, hot skin.* T.,Rr.
. *Cool and dry skin.* T.
. *All the skin feels cool* in spite of a very warm room. F.X.

4. *Colour.*

205. *Skin yellow on the throat and chest.* Kch.
. *Hands yellow.* S.
. Dark colour of skin for 5 or 6 weeks. F.X.

Head :—

1. *Generalities.*

. *Tearing pains in the right cheek-bone,* before and behind the ear, in the temporal bone, and from thence drawing round to the upper edge of the occipital bone. S.
. Shooting and tearing here and there in the head. F.,Rr.
210. Tearing on the left, from the occiput over the ear forward. P.
. Tearing in the middle of the forehead, extending back over the temple, passing off when pressed, after dinner. Ng.
. Contractive headache. R.A.
. He feels as if the forepart of his head on both sides were screwed together (in 2½ hours). Ng.
. TENSION OF THE HEAD, AS IF FROM A BANDAGE. Rr.
215. *Feeling of a cord about the forehead and temples,* CLOSE OVER THE EYEBROWS, AS IF THE HEAD WERE COMPRESSED. F.X.
. Pressive weight on the whole head, AS IF IT WERE BOUND FAST OR COMPRESSED, AS IN A VICE. Rr.

. Pressure on the forehead and temples, drawing towards the nape. Rr.
. *Pressive headache.* T.,X.,F.X.,Hs.
. Violent drawing pains from the crown to the right temple, *so that he is obliged to lie down.* S.
220. *Repeated fits of violent pulsating pains from the nape and occiput* to the forehead and temples. P.
. *Throbbing headache.* T.
. *Twitching here and there in the head.* F.S.,F.X.
. DULL *pain in the head.* T.,H.,S.,P.,F.S.
. *Weight in the head* (in 2 min.). X.,Hs.,S.,Rr.
225. Congestion of blood to the head. F.,Hs.,P.,X.
. Increased temperature in the head, but only internally (in ¼ hour). Ng.
. *Sensation of heat in the left half,* setting out from the ear (in 10 min.). X.
. *Heat in the head with pains.* A.X.,P.,A.H.,L.
. Flying heat in the head without external heat or perspiration, at 6 p.m. Ng.
230. *Pain in the head increased by fresh air,* cough, blowing the nose, *and stooping.* R.A.
. Headache when he came into the room from the fresh air (3rd day). Ng.
. Headache goes away when eating; otherwise lasts all day. R.A.
. The pain between the eyebrows goes off after eating, and returns in ¾ hour. R.A.

2. *Cavity of the Cranium.*

. *Confusion of the head* (in 2 min.). X.,F.X.,L.,A.H.Gs., Rr.,Hs.S.,W.,F.S.,W.Pr.,F.X.,A.X.,Rr.,F.Rr.
235. DIZZINESS. R.A.,F.X.,H.,A.H. (in 2 min.). X.
. Pain in the head, as if after intoxication. Hs.
. Stupefaction. F.X.
. PRESSURE IN THE BRAIN, with burning over the eyebrows. F.X.,A.H.
. PRESSURE AND FLEETING PAINS UNDER THE SKULL, AND EVEN INSIDE THE BRAIN. W.Pr.
240. *Pressure as if from a band on the forehead and temples,* about the anterior lobes of the brain, inside the cranium (in 5 min.). X.
. Sensation of a lump in the brain. Rr.
. Undulation in the brain in the forehead and crown. Rr.
. Pressure in the cerebrum, as if it had not room in the cranium, towards the ears. R.A.
. *Vertigo* (in 2 min.). T.,X.,F.X.,A.X.,H.,A.H.,Gs.,F.S.,W. Pr.
245. *Vertigo on sitting up in bed.* T.
. Vertigo like intoxication, with nausea. Rr.
. Vertigo, with shivering over the upper part of the body, with

loss of consciousness for a moment; he feels as if whirled round in a circle (in 1½ hour). Ng.

. Vertigo, with heat all over, and pains in the nape (in ¼ hour). L.

. Vertigo on closing the eyes, as if everything were turning in a circle. F.X.

250. *Vertigo, with tendency to fall forwards.* Rr.,F.,Rr.

. Dizziness with *staggering,* as if stumbling forwards, but no vertigo. F.X.,X.,F.S.

3. *Forehead.*

. PRESSURE IN THE MUSCLES OF THE FOREHEAD. W.Pr.

. Pressive pain in the forehead. K.,W.Pr.

. Pressure all over the forehead (in 1½ hour). Ng.

255. Pressure in the forehead, aggravated by turning the eyeballs. Rr.

. Great PAIN IN THE HEAD, pressing from within outwards, ESPECIALLY TOWARDS THE FOREHEAD, all day. R.A.,T.

. Periodic pressing pain and heaviness. Le.

. Pressive tearing pain between the eyebrows, tending to close the eyes. R.A.

. *Weight in the forehead,* as if it were falling outwards. Kch., Rr.

260. *Pain in the forehead,* as if the brain would fall out; never on stooping (the 3rd day). Ng.

. Tearing pains in the forehead. P.

. DULL PAIN IN THE FOREHEAD all day (4th day). X.,Hs.,P.

. Continued hollow pain in front of the forehead, and especially at the root of the the nose. Hs.

. Dull stitch, drawing obliquely over the forehead. R.A.,S.,P.

265. Dull continued stitch in the middle of the forehead (in ¼ hour). Ng.

. Transient drawing under the frontal bone. K.

. TRANSIENT PAINS IN THE MUSCLES OF THE FOREHEAD. W.Pr.

. Pain in the forehead towards evening, with stitch on the left side of the forehead. W.

. *Tensive pain in the forehead as if from a cord* every morning (in ½ hour) (for 14 days). F.X.

270. Burning over the eyebrows, drawing towards the temples and crown. F.X.

. Twitching between the brows, towards the right eye. F.S.

. FEELING OF HEAT IN THE FOREHEAD. S.

. Crawling in the frontal protuberance, at short abrupt intervals. R.A.,S.,P.

. Itching in the middle of the forehead, passing off when scratched (in 1¼ hour). Ng.

275. The pain in the forehead ceases with strong gaping. X.

a. Forehead on the right side.

. *Neuralgic pain over the right eyebrow* (in 4 hours). T.,S.

. PRESSIVE PAIN IN THE RIGHT SIDE OF THE FOREHEAD, lasting a short time (in two hours). Sch.,P.
. Pain on a small spot, as if from a blow. Hs.
. *Tearing over the right eye* (in ¼ hour). X.
280. Pressive pain over the right eye. L.
. Itching on the frontal protuberance after eating soup, passing off after scratching. Ng.

b. Forehead on the left side.

. Violent tearing stitches in the left frontal protuberance. R.A.
. *Tearing pain over the left eye* (in ½ hour). X.,K.
. *Tearing pain in the eye,* drawing into the eyelids and the root of the nose. K.
285. *Shooting pain over the left eye.* X.,W.
. STITCHES IN THE BONE OVER THE LEFT EYE. S.,F.S.
. Pressive pain over the left eye (in 7 hours). X.
. Itching in the frontal protuberance, passing off after scratching (in 1¼ hour). Ng.

4. *Temples.*

. THROBBING (in the evening in bed). T.,Kch.
290. VIOLENT THROBBING, WITH GREAT ANXIETY. Kch.
. Violent pulsation in the temporal arteries, with pain in the head. S.
. Pressure. S.
. Dull pain. S.
. Drawing PAINS (in 1 hour). L.,A.H.,P.

a. Right temple.

295. DULL PAIN with beating synchronous with the pulse, as if the vessels were too full of blood (in 2 hours). R.A.,S.
. PRESSURE DRAWING TOWARDS THE CROWN. S.
. Pressive pain, with stoppage of the right nostril. R.A.
. Pressure and shooting for ½ hour. T.
. Violent neuralgic pain over the temple. T.
300. TEARING PAIN, aggravated by touch. A.X.,P.

b. Left temple.

. Disagreeable feeling in the left temple, as if the blood was stagnated in it, followed by dull shooting pain on the same spot (in ½ hour). R.A.
. Frequent stitches and jerking pains (in 2½ hours). F.X.
. *Tearing* from time to time. F.X.,P.
. Twitching. F.S.
305. Drawing pressure. X.
. Drawing from the left ear towards the temple. P.

5. *Parietal Region.*

. Pressure (in 1½ hour). X.
. Pain on both sides, worst on the right. A.X.
. Tearing on the right side. A.X.
310. PAIN ON THE RIGHT (in 5 min.) X.,A.X.,K.
. PAIN ON THE LEFT (in 1 hour). X.,F.S.

. Pain on the left as if from a blow, on a small spot (in 3 hours). Hs.

. *Pressing, drawing pain on the left* (in 7 hours). X.,Hs.

6. *Vertical Region.*

. Periodical SHOOTING PRESSING PAIN IN THE HEAD in the crown, especially when walking fast. K.A.,F.S.

315. Shooting on the left side, returning after a short pause. F.Rr.

. Periodical SHOOTING PAIN IN THE LEFT PARIETAL BONE (in 7 hours). X.

. Some sharp shooting high up in the left parietal bone, p.m. (the 1st day). Ng.

. Shooting pain in the right side of the crown. S.

. Drawing pressure in the left side of the crown. X.

320. PRESSURE ON THE CROWN. A.H.,F.S.

. Splitting pressure and painful pulsation, worse on lying down. T.

. Pressure and heat. Rr.

. Pain in the anterior parts. X.

. THE CROWN PAINFUL TO THE TOUCH LIKE A WOUNDED PLACE. Rr.,F.Rr.

325. The pain draws from the uppermost cervical vertebra quite to the crown towards a PLACE OF THE SIZE OF A LENTIL IN WHICH VIOLENT SHOOTS AND JERKS WERE FELT.

. TOUCHING THIS SPOT AGGRAVATES THE PAIN. F.X.

. Violent stupifying pain from ear to ear, across the top of the head (in $2\frac{1}{2}$ hours). F.X.

. Periodical stupefying pains in the crown and left temple, so that her ideas are lost. N.

. The pains are so violent in the crown as to force out tears (in 6 hours). F.X.

330. *Violent drawing pain from the crown to the nape,* so that she is *forced* to draw up her shoulders, *close her eyes,* and tread lightly. F.S.

7. *Occiput* (see also Nape).

. PRESSURE IN THE OCCIPUT. X.,F.X.,Le.,K.,Gs.

. Pressing pain, drawing round towards the forehead (in 8 hours). X.,W.Pr.

. Splitting pressure and *painful throbbing,* worse on lying down. T.

. WEIGHT IN THE OCCIPUT. F.X.,Rr.

335. *Pain in the occiput.* F.X.,K.,Hs.,S.

. *Drawing pain in the occiput.* X.,S.

. Tensive feeling in the occiput, S.

. Drawing pain towards the nape. T.

. Congestion of blood to the occiput. S.

340. Sensation of cold mounting up from the nape (in $\frac{1}{2}$ hour). Sch.

. Sudden stitch in the occiput towards the right temple (in $1\frac{1}{2}$ hour). F.X.

. *Pain as if the head were drawn backwards.* F.X.

. When she wants to sit up in bed she has to raise her head with her hand, because the occiput seems to be fastened to the pillow and broken off from the rest of the skull (in 12 hours). F.X.

. On awaking in the night, she cannot raise her head without difficulty, from the weight of the occiput. F.X.

a. On the right side.

345. Tearing pain with long stitches towards the front. R.A.

. PINCHING STITCH. R.A.,S.,F.S.

b. On the left side.

. Long, drawing, pressive stitch towards the front. R.A.

. Pinching stitches as it were externally. R.A.

. *Darwing through the left side.* X.

350. Pressing, *drawing pain* (in 7 hours). X.

8. *Scalp.*

. Creeping on the whole of the hairy scalp, and also on individual spots, passing off more or less when scratched. Ng.

. VIOLENT ITCHING ON THE OCCIPUT. X.,F.X.,Ng.

. Scalp on the crown painful, hot to the touch. Rr.

. SENSATION AS IF THE HAIR WERE BRISTLING UP, two inches over the forehead and on the occiput (in ½ hour). S.

355. *Falling off of the hair.* S.,F.S.

. *Great falling off of the hair* on the occiput when combed (from the 6th day onwards). F.X.

. PAIN IN THE ROOTS OF THE HAIR WHEN COMBED, as if there was ulceration beneath. Rr.

. Hair matted for the breadth of four fingers over the right ear. F.X.

Eyes :—

. Burning in the eyes, with a sensation first of warmth and then of freshness and coolness in the eye. (After external use of the tincture). X.

360. Feel of heat in the eyes. S.

. *Burning in the eyes* (in 20 minutes). F.X.,S.

. Burning after gentle rubbing. Rr.

. *Sensation of heat in the left eye* (in ½ hour). X.

. PRESSURE IN THE EYES. S.,F.S.

365. *Tearing,* PRESSURE, AND SHOOTING *in the right*, and then in THE LEFT *eye.* A.X.,P.

. *Tearing pain in the left eye and close above it* (5th day). X.

. *Frequent tearing in the left eye* (in 9 hours). F.X.

. Cramp-like pain in the left eye (lasting 2 minutes). S.

. Itching in the eyes (in 3 hours). T.

370. Itching in the right eye, going off after rubbing. Ng.

. Itching in the left eye (in 1¾ hour). Ng.

1. *Orbits.*

. PRESSURE IN THE ORBITS. W.Pr.

. Stupefying *pressure in the right orbit, as it were from without inwards.* R.A.
. Sleepy pressure in the orbits. Rr.
375. Pressure from the forehead into the orbits. Rr.
. PAIN IN THE ORBITS, as if raw, on moving the eyes. Rr.
. Transient pains in the orbits. W.Pr.

2. *Eyeballs.*

. *Pressure in the eyeballs* (the 7th day). X.,H.
. *Pressure and pain in the upper part of the eyeballs, as if they were squeezed in,* MORE IN THE LEFT THAN THE RIGHT EYE. F.X.
380. *Violent pressive pain* in the left eye, *in the middle of the ball, as if it was so large that the upper lid could not be let down over it.* F.X.
. Pain in the eyeballs on looking up and on moving them. Rr.
. Sudden jerk in the left eye, as if it were torn out, five times in rapid succession (in 1½ hour). F.X.
. Tickling itching in the eyeballs. R.A.
. Contraction of the pupils directly after the dose; in 1 hour they dilate to their usual size. R.A.
385. Diminution of the pain on closing the eyes. F.X.
. *Increase of the pain by* lamp *light.* F.X.

3. *Canthi of the eye.*

. Itching STITCHES IN THE INNER CANTHUS OF THE LEFT EYE (in ½hour). X.
. Continued pricking and burning, as if from a grain of sand, in the inner canthus of the left eye (in 8 days). N.
. Twitching dull pain in the inner canthus of the right eye, passing off when rubbed, but often returning (in ½ hour). Ng.
390. Pricking burning in the outer canthus of the left eye (in ¼ hour). Ng.
. Itching in the canthus of the left eye (the 6th day). X.
. Redness and heat in the inner canthus of the left eye (in 8 days). N.

4. *Eyelids.*

. PRESSURE IN THE UPPER EYELIDS (in 18 hours). X.,Gs.
. Weight in the eyelids, as if they would not open properly, as in sleepiness (in 1 hour). Ng.
395. WEIGHT IN THE EYELIDS (the 8th day). X.,A.H.
. The lids can only be opened with difficulty. X.
. The lids are violently shut down on attempting to open them. X.
. Pain in the eyes, as if the upper lids were violently pressed down (in 10 min.). F. X.
. *Inclination and necessity to close the eyes.* F.Rr.,F.X.

400. She keeps her eyes shut because it relieves the pain. F.X.
. Sense of smelling in the eyelids. X.
. Twitching in the eyelids (in 10 min.). F.X.,F.S.
. Quivering and blinking of the eyelids (in ½ hour). X.
. On trying to open the lids they smart as if sand was in them. X.
405. *Sensation of sand in the eyes,* less perceptible on closing them. X.,A.H.,Hs.,Rr.
. On moving the lids he feels the friction of the upper lid against the eyeball. X.
. The lids smart when touched (in ½ hour). F.X.
. Heat in the lids. F.S.
. BURNING IN THE LIDS (in ½ hour). X.,F.X.,S.,F.S.
410. Burning in the lower lids. S.
. Burning itching in the lids. X.

a. Right eyelids.

. Pressure on the upper right eyelid. R.A.
. Pricking in the right upper lid. P.
. Quivering of the right upper lid. Le.

b. Left eyelids.

415. Pressive pain over the left eye, which seems to be pressed down by the upper lid. R.A.
. Burning in the upper lid. X.
. Burning in the eyelids (in 7 hours). X.
. Shooting in the upper lid. P.
. SHOOTING ON THE INSIDE OF THE LOWER LID. S.
420. Sensation in the left eye as if from a grain of sand (7 o'clock p.m., and long continued). Ng.
. Itching in the upper left lid, passing off when scratched (in ½ hour). Ng.
. A pimple on the left upper lid, containing pus, and pressive pain there on touching or closing the eyes. R.A.

c. The tarsal edge.

. Burning on the border of the left eyelid. X.
. Itching in the tarsi. Rr.
425. *Redness and swelling of the lower tarsal edges.* F.X.,Kch.
. Reddened tarsi of the eyelids. F.S.

5. *Conjunctiva.*

. REDNESS OF THE CONJUNCTIVA OF THE LOWER EYELIDS. F.X., Kch.
. *The white of the eye is coloured dirty yellow* (the 5th day). X., Kch.

6. *Lachrymal glands.*

. Flow of tears in the open air (wind) (in 3 hours). T.
430. Tears, with twitching of the lids (in ½ hour). X.
. *Tears during the pain in the eyes.* F.X.,Le.,Gs.,Hs.,S.

. Eyes watery. S.
. Watering and dull look of the left eye. N.

7. *Meibomian glands.*

. Early, the eyes are agglutinated and cloudy, so that she could recognise nothing until she had washed (the 2nd moning). Ng.
435. *In the morning the lids are swollen and agglutinated* (the 3rd day). T.
. *The lids of both eyes are closed with dry mucus in the morning.* X.,R.X.

8. *Vision.*

. FLICKERING BEFORE THE EYES. A.H.,P.,Kch.,S.,F.S.
. Flickering before the right eye, preventing reading. X.
. Bright flickering spots before the eyes during a fit of anxiety. F.X.
440. *Brilliant specks before the eyes.* Kch.
. MUSCÆ VOLITANTES. W.Pr.
. Illusions of the sight. W.Pr.
. She sees blackish-gray specks before her eyes. A.H.
. A permanent spot appears to be before his eyes, and if he looked at it internally tears flowed. R.A.
445. When writing, the letters run into each other (the 7th day). X.
. When reading, the letters run into each other. Kch.
. *When writing, the letters are not seen so plainly,* as if the lamp were not burning brightly. X.
. *Clouding of the eyes.* W.Pr.
. Transient obscuration of the sight. Kch.
450. Blackness before the eyes when reading. Kch.
. Blackness before the eyes, with a sensation of faintness. F.X.
. During the fit of anxiety she cannot distinguish any object distinctly. F.X.
. OBSCURE VISION, especially of the right eye, as if through a cloud. T.,Rr.,Kch.,S.,F.S.
. *Diplopia.* W.Pr.
455. Far-sightedness. X.
. *Photophobia with pain in the forehead.* F.X.

Ears :—

1. *The conchæ.*

. Burning of the ears. P.S.
. Burning in the lobes of the ears. S.
. Itching in the external ear, passing off when scratched (in ¾ hour). Ng.
a. The right concha.
460. Burning on the lobe of the ear, as if from a burning coal. R.A.
. Long-continued stitch in the external ear, going off gradually (in 3 hours). R.A.

. ITCHING IN THE RIGHT CONCHA (in ½ hour). X.S.
. COLD OF THE RIGHT EAR. S.
. A tearing pain behind the right ear, downwards (in 1¾ hour). Ng.
b. The left concha.
465. Pain like a bruise on the lobe of the ear. R.A.
. BURNING IN THE LEFT EAR. S.
. A tearing pain below the lobe of the left ear (in ½ hour). Ng.

2. *Meatus auditorius.*

. Tearing; ringing set in on boring with the finger. R.A.
. EARS AS IF STOPPED (in 10 min.). X.,F.X.,F.S.
470. Sense of fulness in the ears. F.Rr.
. Dull pressure in the ears. H.
. Pain in the ears. A.H.
. SHOOTING IN THE EARS. A.H.,F.S.
. Itching first in one ear, then in the other. S.
475. Fluid cerumen from the ears, whitish, like paste. S.
a. On the right side.
. Feeling of heat in the right meatus. X.
. Tearing in the right meatus and temporal bone. S.
. Tearing pain (in ¾ hour). R.A.
. Intermittent tearing PRESSURE (in 2 hours). R.A.,S.
480. Painful outward pressure in the right ear, with tickling afterwards (the 1st day). Ng.
. Boring pain in the right ear. F.S.
. Pricking pain (in 10 hours). X.,S.
b. On the left side.
. Pain in the left meatus (in 10 min.). X.
. Shooting pain in the left meatus (in ½ hour). X.
485. SHOOTING. A.X.,K.
. DRAWING. P.

3. *Hearing.*

. Hallucinations repeated for seconds and minutes. W.Pr.
. Noise like a distant waterfall. R.A.
. ROARING IN THE EARS, LIKE A STRONG WIND, relieved by introducing the finger. R.A.,Rr.
490. Roaring in the right ear. F.S.
. Buzzing in the ears. F.X.
. RUSHING. A.H.,Rr.,F.S.
. Noise like far distant artillery. R.A.
. RINGING like whistling (in ½ hour). R.A.,X.,S.,W.Pr.
495. Singing and ringing on closing the eyes (in 2½ hours). F.X.
. RINGING. K.
. RINGING IN THE LEFT EAR when walking (in 9 hours). R.A.,P.,F.S.
. Noise in the left ear, rendering hearing difficult. A.X.
. Ringing in the left ear. K.

500. Hammering in the ears. F.S.

. Loses his hearing when coughing ; it is as if some one were stopping his right ear with his hand (in ¾ hour). Ng.

Nose :—

1. *Outside.*

. Prolonged pressing pain from the root of the nose to the nasal bone. Hs.

. Pressure in the root of the nose (in ½ hour). X.

. Pain in the nasal bone. S.

505. Pain in the cartilage of the nose (in 2 min.). X.

. Tension on the right side of the nose. Afternoon (the 1st day). Ng.

. Itching on the left side of the nose, passing off after scratching (in ¾ hour). Ng.

. Trembling and quivering in the tip of the nose. R.A.

. Pain and crawling in the tip of the nose. S.

510. Cold in the tip of the nose. S.

. Heat and burning in the tip of the nose. S.

. ITCHING and shooting in the tip of the nose. S.,F.S.

. The tip reddened and swollen. A.H.

. Burning of the external border of the nostril (in 5 min.). F.X.

2. *Inside.*

515. Burning in the left nostril (in 5 min.). X.

. Feeling of heat in the nostrils. S.

. Burning towards the tip as if from coryza (in 10 min.). X.

. *Feeling of soreness in the nostrils.* F.X.,N.

. Tearing in the nostrils, most severe in the left. A.X.

520. Feeling as if cold air were, at each inspiration, streaming through the nose towards the mouth (in 20 min.). F.X.

. Sensation of an incipient coryza. T.

. Sneezing twice (in 1½ hour). Ng.

. *Dryness of the nose.* A.H.,S.

. Dryness with itching in the left nostril. S.

525. DRY CORYZA. R.A.,A.H.,S.,Ng.

. The stoppage of the nose ceases on the right side and continues on the left (in ¾ hour). Ng.

. FLUENT CORYZA. X.,R.X.,H.,Gs.,Hs.,S.,P.,F.S.

. Water drops copiously from the nostrils, especially the left. F.X.,H.

. Fluent coryza, with frequent sneezing. H.S.

530. A feeling of coryza with much mucus in the nose (in ⅛ hour). Ng.

. In the morning thick black blood in the mucus of the nose (he had previously suffered from epistaxis). P.

3. *Smell.*

. Disagreeable smell, like soft soap. Gs.

. HALLUCINATIONS REPEATED FOR SECONDS AND MINUTES. W.Pr.

COUNTENANCE.

1. *Expression.*

. A LOOK OF SICKNESS AND SUFFERING. F.X.,S.,Rr.,P.,X.

535. *Sunken countenance* (in 2½ hours). F.X.,P.

. *Eyes sunken with blue borders.* Rr.

2. *Colour.*

. *Pale face.* R.A.,F.X.,P.

. *Grayish-yellow face* (for 5 days). S.

. *Complexion strikingly yellow, as if from jaundice* (the 5th day). X.,Kch.

540. The red of the cheeks is darkened by the mixture of yellow. X.

. Strikingly dark colour of the face, as if sun-burnt, for 5 or 6 weeks. F.X.

. *Redness of the face,* and veins of the hands swollen without external heat, at 5 p.m. Ng.

. REDNESS OF THE LEFT CHEEK, passing gradually from bright red to dark red. R.X.,F.X.,X.

A RED CIRCULAR SPOT ON THE RIGHT CHEEK (in ½ hour). F.X., R.X.

545. A small, defined, burning, dark red, circular, somewhat elevated spot on the left cheek, which in ¼ hour attained the size of a two-thaler piece. F.X.,R.X.

3. *Temperature.*

. Feeling of great cold in the face, cheeks pale, and feeling cold (for 2 hours). F.X.

. Glowing *heat in the face* with dark obscure red complexion (the 2nd day). F.X.,K.,Kch.,S.

. BURNING AND SENSE OF HEAT IN THE LEFT CHEEK. X.,P.

. *Redness and heat of the cheeks.* S.,F.S.

550. FLEETING HEAT IN THE FACE WITH RED CHEEKS. F.X.,Kch.,N.

. Increased temperature in the face. W.Pr.

4. *Sensations.*

. BURNING OF THE CHEEKS. S.

. Burning of the left cheek (in 10 hours). F.X.

. Prickling stitch on the left cheek (in ½ hour). X.

555. Burning pain in a small spot of the skin over the left corner of the mouth (in ½ hour). X.

. Burning of the skin over the left eye, and sensation on rubbing it as if after a blow. X

. Pain of the skin on touching it over the left eyebrow. Hs.

. Burning pain of the skin on the cheeks towards the ears (in 7 hours). X.

. Burning of the skin on the left temple towards the ear (in ½ hour). X.

560. Burning as if from nettles here and there on the face, as if an eruption had set in. F.X.

. Burning pain on the right side in the upper and lower jaw, in the teeth on the right side, and in the right cheek, the right half of the upper and lower lip reaching exactly to the middle, intermitting, with isolated stitches drawing here and there in those parts, worst in the evening in bed. Warmth aggravates, cold water relieves the pain. Hs.

. Tensive feel between the eye and mouth. S.

. Sensation as if the skin of the forehead was drawn together over the left eye (in 5 min.). X.

. Burning itching on the right cheek near the ear (in ½ hour). X.

565. Itching on the forehead and temples. P.

. Itching in the right nostril, where it passed off after scratching, but reappeared on the zygoma, then on the left nostril, then over the left temple, where at last it passed off after scratching (in 1 hour). Ng.

. Itching over the left eye, passing off when scratched (in 1¾ hour). Ng.

. Itching first here then there in the face and head, seldom passing off after scratching (2 o'clock p.m.). Ng.

. Itching here and there in the face, only when sitting, afternoon. Ng.

570. Itching in the right corner of the mouth, passing off when scratched (in 1 hour). Ng.

. Itching over the upper lip, passing off when scratched. After eating soup. Ng.

. Itching smarting in the right cheek. After rubbing it comes in the left (in ½ hour). Ng.

5. *Eruptions.*

. RED PIMPLES HERE AND THERE ON THE FACE. A.H.,Kch.

. ON THE UPPER PART OF THE RIGHT CHEEK MANY RED ELEVATED PIMPLES RAISED IN THE CENTRE AND FEELING POINTED. F.X., R.X.

575. *Elevated exanthema on the face.* W.Pr.

. Red inflamed elevated spot, with a pimple in the middle, in the centre of the forehead itching and pricking, which disappeared again in a few hours (in 20 hours). X.

. Large pustules on the forehead. Kch.

. The whole face, except the forehead, is covered on awaking in the morning with bright red, lentil-sized round spots (often confluent), with pointed pimples in their centre, after a burning like nettles the day before. F.X.

. A vesicle with red areola on the right cheek near the corner of the mouth. R.X.

580. VESICLES ON THE LIP AND ALÆ NASI FORMING SCABS AFTERWARDS. H.,Kch.

. Papular exanthema on a red base on the upper lip and right cheek. W.Pr,

. On the right ala nasi and on the under lip (left side) small yellowish burning vesicles, from which little yellowish scabs

are formed on the following day. F.X.
. A pimple on the edge of the upper lip on the left side, on which was formed a vesicle, which, when opened, caused continued burning. Hs.
. A pimple on the right cheek near the corner of the mouth, somewhat sensitive only when pressed (3.30 p.m.). Ng.

BONES OF THE FACE.

585. PRESSURE OR TRANSIENT PAINS IN THE CHEEK BONES. W.Pr.

1. *Upper jaw.*

. Digging, tearing in the cavity of the upper jaw (antrum). R.A.
. Drawing in the upper jaws (in ½ hour). X.
. Dull pain (the 12th day). X.
a. Right side.
. STRONG PRESSURE on awaking at night. Le.,S.
b. Left side.
590. DRAWING PAIN towards the left eye and ear. X.,P.
. The pain draws in the upper jaw near the nose, towards the eye, and in the temple. F.X.
. (The pain near the nose is throbbing, as if an ulcer were forming. F.X.)
. (The painful spot seems to her to be swollen and suppurating beneath. F.X.)
. On the commencement of frosty weather the pain gets violent towards evening, and awakes her often in the night. F.X. (Several years before she had gumboils in this place with like symptoms.)

2. *Zygoma.*

595. Burning pain in the zygomata. S.
a. Right side.
. Burning pain. Hs.
. Dull pressure, drawing towards the right ear. S.
. Drawing pain. S.
. Feeling of swelling in the right cheek-bone. S.
b. Left side.
600. PAIN IN THE LEFT CHEEK BONE. Hs.,F.S.
. Tension and DRAWING on lying down. R.A.,P.
. Pressive drawing. Le.
. *Jerking pain in the right zygoma,* as if it were torn to pieces. F.X.

Teeth :—

. PRESSURE OR TRANSIENT PAINS IN THE TEETH. W.Pr.
605. Drawing pain through all the teeth (in 2 min.). X.
. *Pains in the teeth lasting several weeks, chiefly in the whole of the left cheek, especially at night.* P.
. Jerks in the teeth. F.S.
. Feel of heat in the teeth (after chewing the plant). X.
. The teeth seem too long, and are painful when chewing. X.

610. Violent pains in all the teeth when speaking (in 2½ hours). F.X.

. Toothache every night (for 8 days). F.X.

. The pains draw into the right temple (the 6th day). X.

1. *In the upper jaw.*

. DRAWING IN THE UPPER INCISORS. X. S.

. Drawing pain in the upper teeth. X.

615. Short jerk in the upper incisors. S.

. Toothache drawing up towards the eyes. F.S.

a. Right side.

. Drawing PAIN IN THE MOLARS OF THE RIGHT SIDE (the 6th day). X., F. S.

b. Left side.

. Toothache on the left. R.A.,P.,F.S.

. Toothache starting from the left ear. P.

620. Drawing pain in the molars (in 10 min.). X.

. Sudden jerk in the teeth as if they were torn out, five times in succession (in 1½ hour). F.X.

. The two furthest molars in pain day and night, awake him out of sleep, and hinder him when chewing ; he cannot distinguish whether the upper or lower teeth ache ; the upper ones alone are painful to the touch. X.

. Violent pains in the molars, which extend to the left ear and draw into the left eye, with swelling and redness of the left side of the face, whereupon an abscess formed on the hard palate (after rubbing the tincture into the eyelids). X.

2. *In the lower jaw.*

. Dryness. R.A.

625. DRAWING PAIN THROUGH THE TWO MIDDLE INCISORS (the 6th day). X.,S.

. Drawing pain in the left molars (in 10 min.). X.

. Tearing pain in the left, increased by chewing, for five minutes (in 2 hours). F.X.

. Feel in the teeth on the left as if they were all loose, shaking, and too long (in 1½ hour). F.X.

Mouth :—

1. *Lips.*

. BURNING (after chewing the plant). X.,W.Pr.

630. Repeated stitch in the lower lip, left side (in ½ hour).

. *Dryness of the lips.* K.,F.S.

. Dry, chapped, and scabby lips. S.

. Swelling of the lip and peeling off of the skin. F.S.

. Vesicle on the lips. F.S.

635. A small indolent pimple on the lower lip. T.

. Vesicle full of serum as clear as water on the mucous membrane of the lower lip, which burst and disappeared. W.Pr.

2. *Gums.*

. A swelling appeared suddenly over the left eye tooth, out of which blood flowed. F.S.
. Bleeding of the gums. P.

3. *Cavity of the mouth.*

. *Dryness in the mouth.* F.X.,A.X.,A.H.
640. *Dryness in the mouth, with thirst,* 4 p.m. Ng.
. Dryness, so that the tongue almost clave to the palate. L.
. Dryness and heat. K.
. BURNING AND A SENSE OF HEAT IN THE CAVITY OF THE MOUTH (after chewing the plant). X., W.Pr.
. Vesicles here and there in the mouth. F.S.
645. Abscess on the left side of the hard palate near the furthest molar, of the size of a bean (after rubbing the tincture on the eyelids). X.
. MUCUS IN THE MOUTH in the morning. Gs.,W.Pr.
. Bad odour from the mouth. S.

4. *Tongue.*

. Slimy tongue. R.A.
. *Tongue coated white.* R.A.,T.,Hs.,Rr.,W.Pr.
650. Tongue in the morning with gray, shaggy, THICK COAT, which can partly be rubbed off. S.,X.
. Pricking on the tongue. P.
. Stitch on the end of the tongue, left side (in 5 min.). X.
. Burning in the tip of the tongue (after chewing the plant). X.
. *Dry tongue.* K.
655. Difficulty of speech. F.X.

5. *Salivary glands.*

. Collection of water in the mouth (directly after taking it). Ng.
. Watering in the mouth. S.
. GREAT FLOW OF SALIVA IN THE MOUTH, with disgust (in 3 hours). Le.,W.Pr.
. COLLECTION OF WATER IN THE MOUTH, with nausea and giddiness. F.X.,H.,X.
660. Bitter water collects in the mouth, obliging her to be constantly spitting (in ¾ hour). Ng.
. Tough mucous saliva. Rr.,W.Pr.

6. *Taste.*

. DISGUSTING TASTE, WHILST FOOD TASTES NATURAL. R.A.,Rr.
. Bad taste of food. T.
. *Pappy taste.* T.,Rr.,W.Pr.
665. *Bitter taste,* whilst food and drink taste naturally (in 2 hours). R.A.,F.X.
. Bitter taste, lasting long, caused by bitter eructations. F.X.
. Bitter in the mouth and burning in the stomach. Ng.

. Sweetish taste in the throat on awaking in the night, as if after chewing liquorice or the stalks of *Dulcamara* (after chewing the plant the morning before). X.

. Taste on the tongue as if one had tasted vinegar sometimes before (in ¼ hour). X.

670. Metallic *acid taste* on the tongue. Gs.

Appetite :—

1. *Hunger.*

a. Diminished.

. DIMINISHED APPETITE. R.A.,T.,F.X.,Hs.

. *Loss of appetite.* T.,F.X.,Rr.,F.Rr.

. During the fits of pain she can eat nothing. F.X.

. *Appetite fails from anxiety* in the chest. F.X.

675. No appetite in the evening for six days in succession (from the 6th day onwards). F.X.

. For some days she can hardly take anything. F.X.

b. Increased.

. Stronger feeling of hunger than usual before dinner (in 2 hours). X.

. He must eat more breakfast than usual in order not to be faint with hunger before dinner time. X.

. Unusual hunger shortly before noon. F.X.

680. INCREASED APPETITE, morning and noon for some weeks. H., A.H.,Gs.,P.

. Unusual appetite towards 4.30 p.m. Rr.

. Sense of emptiness in the stomach, as in bulimia (immediately after taking it). X.

. He has to eat some white bread to remove nausea (immediately after taking it). X.

. Hunger difficult to appease (in 2 hours). Kch.

2. *Thirst.*

685. *Thirst diminished.* R.A.

. *Increased thirst*, with dryness in the mouth and throat. F.X., K.,A-H.,F.S.

3. *Special longings.*

. Much thirst for milk, taking which makes him feel comfortable all over, without any suffering after it, though at other times it produced flatus (in 36½ hours). R.A.

. Milk soup, which at other times did not agree with him, to-day does quite well (the 2nd day). Ng.

. Milk tastes pleasanter than ever before (in 8 weeks). F.X.

690. Great longing for wine ; which does not, as formerly, produce congestion and heat in the head. X.

. Taking wine relieves the abdominal pain. Gs.

. Great longing for Seltzer water. Kch.

. Whilst taking the medicine inclination for warm drinks ; after the proving had ceased continued thirst for cold water. Rr.

. Great longing for hot coffee, the high temperature of the beverage agreeing well with him (in 7 hours). X.

4. *Special dislikes.*

695. GREAT DISLIKE TO CHEESE, WHICH, THOUGH GOOD, SEEMS TASTELESS. X.,F.X.
. Great dislike to cold drinks. T.
. *Boiled food, especially flesh, is disagreeable to her.* F.X.

FAUCES AND ŒSOPHAGUS.

. Slight irritation in the œsophagus, imperceptible when swallowing (the 2nd day). T.
. Feeling as if the velum pendulum fell down towards the gullet. T.
700. Pain in the throat, as if from taking cold. T.
. Slight shooting in the tonsils on empty swallowing (in ½ hour). X.
. Shooting in the throat. A.X.
. Pricking in the throat as if from a fish-bone. N.
. Pain in the fauces, as if from catarrh (the 5th day). X.
705. Contractive spasm in the gullet (in 1 hour). Lc.
. Sense of contraction in the throat, forcing him to swallow (in 20 min.). F.X.
. *Feeling of dryness in the throat.* X.,F.X.,A.X.,K.,A.H., S.,F.S.
. Feeling of dryness during empty swallowing. X.
. Dryness in the throat, with a sensation of dust there (in 11 hours). Hs.
710. Roughness in the throat *per se*; when swallowing he does not feel it; long continued (in ¼ hour). Ng.
. SCRAPING IN THE THROAT. H.,Rr.,F.S.
. BURNING IN THE GULLET. Ng.,A.H.,W.Pr.
. Heartburn disappears in five minutes after the medicine. S.,P.
. Smoking causes burning pain and acidity from the cardia quite up into the throat. Lk.
715. Heat and burning from the mouth down to the stomach. W.Pr.
. A feel as if some foreign body was mounting up in the throat, obliging him to swallow, and then going down again (in ¼ hour). K.
. Choking, as if one had swallowed a too large bit too fast. R.A.
. *Difficulty of swallowing* (in 20 min.). F.X.
. SECRETION OF THIN MUCUS. H.,Gs.
720. Hawking up of lumps of mucus. S.
. Tough mucus in the fauces. W.Pr.
. (Hawking up of bloody mucus, with the taste of blood; return of a previous suffering.) F.S.

GASTRIC SUFFERINGS.

1. *Eructation.*

. *Frequent eructation of wind.* R.A.,X.,F.X.,R.X.,L.,Gs.,P., F.S.,W.Pr.

. EMPTY ERUCTATION, R.A. (in ¾ hour). Ng.,W.Pr.

725. Abortive eructation. Kch.

. Eructation with taste of juniper berries (in ½ hour). Ng.

. At night, in bed, two *eructations, so bitter* that she shuddered. A bitter aftertaste continued. F.X.

. *Eructations with heartburn.* Hs.

. ERUCTATION RELIEVES THE NAUSEA. A.H.,A.X.,X.,F.X.,L.,H.

2. *Nausea.*

730. *Nausea* (in 1 hour). X.,Le.,A.X.,A.H.,Hs.,S.,Rr., N.

. Nausea with inclination to vomit (from the external application). R.A.

. *Nausea, with inclination to vomit.* F.X.,A.X.,L.,Kch.

. GREAT NAUSEA, WITH INCREASED TEMPERATURE OF THE BODY (in ¼ hour). R.A.,T.

. Nausea, with fainty sensation (in 2½ hours). F.X.

735. Nausea on attempting to eat (in 2½ hours). F.X.

. Nausea mounting up from the stomach. Sch.,X.,Ng.

. *Nausea and retching during a fit of anxiety* (in 5 hours). F.X.

. *Sickness after eructation* (soon after the medicine). Ng.

. SICK AND SQUEAMISH IN THE STOMACH; passed off after eructation (in ¾ hour). Ng.

740. Disgust. Le.,W.Pr.

3. *Vomiting.*

. *Vomiting of some mucus* without relief of the headache (in 6 hours). F.X.

. *Vomiting of tough mucus* after severe nausea. Kch.

. Vomiting of curdled milk after a fit of coughing (a child). R.X.

. In the forenoon *vomiting* of potatoes eaten the evening before, with a *sharp acid taste* and scraping in the throat (in 14 hours). F.Rr.

745. *Hiccough* in 1½ hour and frequently. R.A., F.X.

ABDOMEN.

1. *Stomach and scrobiculus cordis*

. Dull stomachache. W.Pr.

. *Pressure on the stomach.* F.X., S.

. Pressure on the stomach, more towards the left (in ½ hour). X.

. Pressure on the stomach for some hours, *increased by external pressure* (in 3 hours). Le.

750. *Pressure on the stomach, with eructation of wind.* L., H., A.H.

. *Pressure and oppression of the stomach,* DRAWING UP TOWARDS THE CHEST (in 1½ hour). S., F.S.

. Pressive pain and burning between the scrobiculus cordis and navel. K.

. *Pressure in the pit of the stomach, with oppression of the chest and difficult breathing.* F.X.

. Weight and pressure in the gastric region after drinking water. Kch.

755. PINCHING PRESSING PAIN IN AND BELOW THE SCROBICULUS CORDIS, increased by the touch (in 3 hours). R.A., P.

. Tensive pain in the scrobiculus cordis on taking a deep inspiration (in 5 min.). X.

. *Anxious feel in the stomach.* F.S.

. Oppressive pain above in the scrobiculus cordis. S.

. Stomachache for 1 hour, with eructation of wind, relieved by lying on the left side with the legs drawn up (brought on me before through getting out of bed at night). X.

760. STOMACHACHE, as if cramp were setting in. (Many years ago he had suffered once from cramp in the stomach). Hs.,S.

. Aching in the scrobiculus cordis and at the corresponding part of the back. Hs.

. Spasmodic pain in the scrobiculus cordis, towards the right, lasting all day. S.

. Contracting feel with squeamishness (in 1 hour). Ng.

. Contracting feeling under the gastric region (in ½ hour). Ng.

765. *Violent pain in the scrobiculus cordis, as if the stomach was constricted.* F.X.

. Digging in the stomach. S.

. *Digging pain in the gastric region.* P.

. *Distention of the stomach.* Hs.,P.

. Burning in the stomach with eructation (soon after the medicine). Ng.

770. The warmth of the stomach goes and comes again (in ¾ hour). Ng.

. Feel of heat in the stomach with pressure and pinching, sometimes more sometimes less severe. T.

. FEEL OF HEAT IN THF GASTRIC REGION and slight griping (in 3 hours). Sch.; (in ½ hour), X.; (in 1¼ hour), Ng.,F.S.

. Pleasant warmth in the scrobiculus cordis (in 10 min.). F.X.

. COLD FEEL IN THE STOMACH (in ½ hour). Ng.,Hs.

775. STITCHES IN THE PIT OF THE STOMACH (in 3 hours). Le.,H. S.,F.X,

. Shooting in the side of the stomach (in 1¾ hour). Ng.

. A pointed painful stitch in the scrobiculus cordis inwards, passing through to the very back, 5.30 p.m. Ng.

. CUTTING IN THE STOMACH increased by pressure. Le., F.S.

. Cutting in the stomach during yawning, at 1 p.m. Ng.

780. Pinching first in the right, then the left gastric region, and then tension there ½ hour after dinner. Ng.

. Peculiar feel of knawing and clawing in the stomach, which passes off after eating (the 1st day). Ng.

. Cramping throbbing in the scrobiculus cordis, causing ANXIOUS BREATHING (in 5 hours). R.A.

. Relief caused by a gurgling in the stomach, as if bubbles were rising and bursting. F.S.

2. *Hypochondria.*

. Tension over the epigastric region. R.A.

785. Pain in the hypochondria. X.

. Cutting pain. X.

. Periodic obtuse pain, worse on the right than the left. Lc.

a. Right side.

. Dull throbbing in the region of the liver. T.

. *Pressive pain in the region of the liver.* Hs.

790. Pressure in a small spot in the liver, at the bend of the ribs, along the linea mammalis. Hs.

. Pressing pain in the region of the liver, on the edge of the ribs. *The pressure* of the clothes *increases the pain* here (the 13th day). F.X.

. Pain in the region of the liver, which extends quickly downwards across the navel into the intestines (in 10 min.). F.X.

. Spasmodic pain in the region of the liver (in 10 min.). F.X.

. STITCHES IN THE LIVER. S., F.S.

b. Left side.

795. Burning over the ribs. R.A.

. Burning pain (in 14 hours). R.A.

. Dull stitch (in ¾ hour). X.

. PAIN AS IF BRUISED (in one hour). X., S.

3. *Umbilical region.*

. Painful PRESSURE JUST OVER THE NAVEL. R.A., P.,S.

800. Dull PINCHING IN THE UMBILICAL REGION, followed by flatus (in 1 hour). R.A., Sch., Ng.

. SPASMODIC CONTRACTION OF THE NAVEL, with transient nausea (in 6½ hours). R.A., S.

. Constricted feeling over the navel, as if the abdomen were tied round with a string. F.X.

. Drawing pain over the navel (in 4th day). X.

. Violent, pressing, periodically returning, and also continued spasmodic *pain in the umbilical region.* P.

805. Violent PAIN AROUND THE NAVEL (the 2nd day). F.X., S.

. Pain on the left near and over the navel (in 5 min.). A.X.

. Pinching about the umbilical region (in 1¼ hour). Ng.

. Transient pains around the navel. W.Pr.

. Violent, obtuse shooting under the navel, so that he has to crouch for a minute, then once again when standing up (in ½ hour). Ng.

810. Cold, especially close under the umbilical region. Gs.

4. *Iliac Region.*

. Pain over the left hip, as if there was something thick and bulging there. R.A.

. Pressing pain on the left. K.
. Pressure on the crest of the ilium, more on the right than the left. Hs.

5. *Hypogastrium.*

. Drawing pain. X.
815. Aching sensation. Hs.
. Pinching under the navel in the hypogastrium, with diminution of the great heat of the body, evening (5 o'clock). Ng.
. Tension in the hypogastrium on both sides (in 4 hours). T.

6. *Inguinal Region*

. Pinching pain in the left groin (in 9 hours). R.A.
. Pains on both sides, preventing walking. F.X.
820. SPASMODIC DRAWING PAIN ON BOTH SIDES, WITH PRESSURE ON THE BLADDER. F.X.
. TENSIVE SPASMODIC PAIN ON EACH SIDE, EXTENDING FROM ABOVE DOWN AND INWARDLY, WHEREUPON THERE WAS A DISCHARGE OF TURBID LEMON-COLOURED URINE. F.X.
. Labour-like pain, drawing from the lumbar vertebræ over the hips, towards the hypogastrium, for ¼ hour. F.S.

7. *Parietes of the abdomen.*

. CONTRACTION OF THE ABDOMINAL WALLS. L., S.
. Drawing pains in the evening (the 9th day). Hs.
825. When coughing the whole abdomen is painfully contracted. F.S.
. Pains in the evening on the left side, increased by contracting the abdomen. Hs.

8. *Intestines.*

a. Sensations.

. Belly-ache. R.A.
. Shooting pain. X.
. Continued cutting directly after eating what had tasted good. R.A.
830. CUTTING IN THE INTESTINES. X., L., P.
. CUTTING IN THE ABDOMEN over the right lumbar region, towards the back. Sch.
. JERKING CUTTING IN THE INTESTINES, AS IF FROM KNIVES; no relief from a thin stool. Sch.
. Feel of heat in the intestines below the navel (in ½ hour). X.
. Burning in the bowels on the left near the navel, and in the left hypochonder. X.
835. Burning pain in the umbilical region (in ½ hour). X.
. Cold feeling in the belly (in ½ hour). X.
. Cold feeling and pressure in the abdomen, especially below the umbilical region, with cold of the whole body. Gs.
. Cold feeling in the abdomen on drinking water. Gs.
. *Pinching*, as if stool were coming on. X.

840. PINCHING, EXTENDING TOWARDS THE CHEST and back, relieved by passing flatus. Kch.

. *Sensation of fulness in the abdomen.* X., W.Pr.

. DISCOMFORT, as if after taking a purge. Gs.,Hs.

. Great discomfort in the abdomen, with pain, relieved by a glass of wine. Gs.

. Spasmodic pains between the navel and scrobiculus cordis. P.

845. Digging in the intestines, with nausea. Hs.

. Constant pinching and commotion here and there in the intestines, 1.30 p.m. Ng.

. Feeling as if the intestines were torn out of the abdomen, upon which she lost her senses (in 6 hours). F.X.

. Sensation of turning and moving above the navel, as if an animal were wriggling through the bowels. F.X.

b. Accumulation of flatus.

. Gurgling and rumbling in the abdomen. R.A.

850. RUMBLING, with diarrhœa following. P.,X.

. Rumbling in the abdomen over the navel, passing downwards before and after the diarrhœa. Sch.

. Much rattling in the abdomen. Le.

. Dull *rumbling in the abdomen* (in 1½ hour). L.,P.,Kch.

. *Painful distention.* Hs.

855. *Inflation of the abdomen.* W.Pr.

. DISTENTION, NOTWITHSTANDING MUCH ERUCTATION. Gs.,P.,S., F.S.

. *Abdomen distended and hard*, without pain on being touched. Sch.

. Painful accumulation of wind in the umbilical region, diminished by three days' mucous diarrhœa. Lk.

. ABUNDANT DISCHARGE OF FLATUS. R.A.,F.X. (the 6th day). X. (in 10 hours). L.,P.,Sch.,F.S.,W.Pr.

860. Much escape of wind at stool. X.

. Fetid flatus. Kch.

STOOL AND ANUS.

1. *Constipation.*

. Costiveness, stool like sheep-dung for two days. R.A.

. Solid stool and long delayed (the 1st and 2nd day). Ng.

. Stool dry and tardy. W.Pr.

865. *No stool* (the 4th day); ordinary stool (the 5th day). Ng.

. On the third evening a hard stool, for the first time since the medicine, with straining. Sch.

. STOOL VERY HARD AND DIFFICULT, WITH PAINS IN THE ANUS IN CONSEQUENCE. F.X., Rr.

. STOOL TARDY AND CONFINED. Gs.,F.S.

2. *Diarrhœa.*

. Diarrhœa, three stools each night. R.A.

870. Five loose stools one afternoon. Sch.

. Diarrhœa for four days. Sch.
. THIN STOOL FOUR TO SIX TIMES IN CLOSE SUCCESSION (the 3rd day). X.,F.X.,Sch.
. REPEATED THIN FLUID STOOLS DAILY, from four to eight days' duration. H.,A.H.,Sch.,Kch.
. EVACUATION SHORTLY AFTER THE MEDICINE. S.,K.
875. Increased evacuations. W.Pr.
. Brown watery stool. P.
. *Mucous diarrhœa.* R.A.,Le.,P.,Kch.
. *Painless diarrhœa.* Sch.
. *At night*, once, *severe watery, whitish diarrhœa, with nausea, after previous severe chill in the evening.* Hs.
880. Some small, thin, bright yellow stools, with or without cutting in the bowels beforehand. T.
. Watery stools three times in rapid succession, followed by cessation of the cutting (in 10 hours). L.

3. *colour of the evacuations.*

. Thin, *bright yellow stool*, like a child's, with yellow complexion (the 5th day), for three days; on the fourth day, a dark brown pappy stool. X.
. PAPPY BRIGHT YELLOW STOOL. F.X.,Gs.,T.
. *Soft bright stool*, with straining and moderate pain in the anus afterwards. T.,Le.
885. Whitish diarrhœaic stool. Hs.
. Dark yellow fluid stool, four days later whitish (a child). R.X.
. Soft greenish stool, with cutting pain in the rectum and higher up. Le.
. *Whitish* RED, *hardish stool*, Gs. (traces of blood in the stool); (hæmorrhoids previously). Gs.
. THE LAST PART OF THE EVACUATION MIXED WITH A LITTLE BLOOD. Kch.

4. *Sensations.*

890. Pressure in the rectum, with urging to stool (in 1 hour). T.
. Frequent straining, then a hard stool, with pressing; previous to the medicine, he had normal stools (in ¾ hour). Ng.
. PERIODIC STRAINING AND PRESSURE ON THE RECTUM, AS IF BEFORE STOOL, WITHOUT RESULT. F.X.,Gs.,P.
. DRAWING TOWARDS THE RECTUM. L.,Hs.
. SENSATION AT STOOL AS IF THE ANUS WAS COSTRICTED. F.X.,Gs.
895. Sensation as if the rectum was forced out, with spasmodic constriction of the anus, lasting all day. F.X.
. SHOOTING IN THE ANUS for half a day. Hs.,P.
. Painful stool. S.
. CUTTING PAIN IN THE ANUS AND RECTUM DURING A HARD STOOL. Rr.,F.X.
. Burning and cutting in the rectum, with alternation of itching in the anus, vertigo, fainty sensation and failure of appetite. F.X.
.

900. **Painful nodule on the anus, four millimètres in diameter, and bluish red colour, giving her some pain when lying, sitting, or walking; she gets most ease in a stooping posture. F.X.**

. A mucous discharge from the anus. F.X.

. CRAWLING AND ITCHING IN THE RECTUM. S.,P.

. ITCHING IN THE ANUS (in 10 min.) X.,H.,Ggs.,S.,P.

. DAILY ITCHING IN THE ANUS AND RECTUM FOR FIVE WEEKS. F. X.,S.

905. Pressing, tension, and squeezing at the perinæum (the 7th day). X.

Crawling, pricking, and ITCHING on the perinæum. S.

. Pain in the perinæum. Hs.

. Itching on the os coccygis. S.

URINARY SYSTEM.

1. *Renal region.*

. Blunt stitches in rapid succession in the left loin, more towards the back (in 10 min.). R.A.

910. Deep dull pain on each side of the lumbar region (in ½ hour). T.

. Pressing pain in the left renal region (in 10 min.). X.

. Stitch in the left kidney on deep inspiration (in 5 min.). X.

. A transient pain on the left side on a small spot, as if from a blow; then the same on the right side of the spine. Hs.

. From afternoon till he fell asleep at night, a dull pain in the left renal region. Hs.

915. *Pain in the region of both kidneys* which are very sensitive to pressure. Even the bands of the under clothing give pain there. F.X.

. In the morning on rising, violent stitches in the renal region, making her cry out aloud and then fall down. F.X.

. The stitches specially in the left renal region are increased by walking. F.X.

. Awaking in the night from violent pains in the left renal region. F.X.

. She cannot lie on her back owing to pains in the renal region, and must also often change from side to side, and gets most relief by lying on her face. F.X.

920. Spasmodic pain in the right kidney with sweat on the forehead and hands. F.X.

. Pains in both kidneys, with anxiety and transient heat. F.X.

2. *Ureters* (see Inguinal Region).

3. *Bladder.*

. Pressure on the bladder. A.H.

. Dull pain, like forcing, deep in the bladder (in 1 hour). Lc.

. Pressive pain deep down above the os pubis. P.

925. SHOOTING *pains in the region of the bladder.* F.S.

. Pressure over the os pubis (the 7th day). X.

. Spasmodic pain close above the os pubis, with frequent urging to pass urine (the 3rd day). F.X.

. After passing urine, pinching in the lower bowels, 6 p.m. Ng.

4. *Urethra.*

. Burning in the urethra just when the urine is about to come. R.A.

930. BURNING IN THE URETHRA WHEN PASSING URINE. K.,S.,Kch., W.Pr.

. Burning in the mouth of the urethra. T. (in 1 hour). X.

. Shooting and cutting in the urethra on passing urine, and on moving the body. R.A.

. SHOOTING IN THE URETHRA, especially towards the point. Le., X.

. Stitch in the orifice of the urethra. X.

935. CUTTING PAIN IN THE URETHRA ON PASSING WATER, AND STILL CONTINUING AFTERWARDS. F.X.,P.,Kch.

. Spasmodic in urethra on passing urine (in 1½ hour). F.X.

. Discharge of blood from the urethra during coition (a former ailment). W.

5. *The urinary function.*

. Urine visibly increased (the 2nd month). Ng.

. He had to make water ten to twelve times a day, and two or three times a night, and a great deal each time (in 24 hours). R.A.

940. Larger stream when passing urine. Gs.

. Frequent dribbling of urine.

. Escape of a drop from the urethra (after the burning), without any sensation from it. X.

. Call to make water every ¼ hour, passing some five times within 1½ hour (in ½ hour). F.X.

. CALL ALL DAY WITH LITTLE URINE PASSED (in 2 hours). R.A., F.X.,S.

945. Sudden strong urgent pressure on the bladder (in ½ hour). X.

. Call to micturate six times in rapid succession, with little passed each time (in 2 hours). F.X.

. FREQUENT CALL TO PASS WATER, which passes off again without requiring to pass urine (the 12th day). F.X.,W.Pr.

. Call to pass water, and cutting in the urethra lasting two or three hours after passing water. Le.

. FREQUENT CALL TO PASS URINE. K.,A.H.,H.,Gs.,Hs.,S.,F.S.

950. Forcing and pressing during urination, with groaning and holding the breath five times a day till evening (a child). R.X.

6. *Urine.*

. Urine in increased quantity, pale, watery. W.Pr.

. Urine very pale, small in quantity, and infrequent (the 2nd day). Ng.

. *Urine reddish and turbid immediately after being passed.* S.

. REDDISH URINE (after external use). R.A.,F.S.

955. *Urine bright red.* T.

. Napkins *reddish brown* from the urine ; after drying, still more darkly coloured. R.X.

. SOME HOURS AFTER THE MEDICINE, THE URINE DARKER *brownish* OR GREENISH. W.Pr.

. At 2 p.m. the *urine dark brown*, turbid, forming bubbles on the edge *like brown beer.* That passed towards evening is again normal. F.X.

. After pains in the renal region and in the direction of the ureters quite into the bladder the day before, reddish urine in the morning becoming turbid in ¼ hour. After 2 hours a *reddish flocculent sediment.* The urine was not quite clear over this sediment the next morning. X.

960. The urine has an excess of acid uric salts, and only traces of chlorides (in 14 days). F.X.

. *Urine turbid as soon as passed*, lemon yellow after previous pains in the inguinal region. In 1 hours a *grayish-yellow* mucous cloudy *sediment* without the urine being cleared. The inner surface of the utensil is covered with reddish crystals of uric acid as far as the urine reaches. The urine is turbid from an excess of acid uric salts, is deficient in chlorides, contains crystals of hippuric acid, mucous epithelium and compact urinary cylinders. F.X.

. Urine foaming. P.

. *Urine with a sharp acid smell.* F.X.,A.H.,F.S.

. URINE SMELLING RESINOUS. W.Pr.

965. Urine with a strong ammoniacal smell. W.Pr.

GENITALS.

1. *Males.*

a. Penis.

. Pressure on the under side of the glans and the orifice of the urethra. X.

. Tiresome sensation in the glans as if after strong erections (in ½ hour). X.

. Pressure and forcing towards the root of the penis. Le.

. PAINS IN THE GLANS. Hs.,P.

970. Pains on the right side of the glans on a little spot, as if from pinching. Hs.

. Itching on the glans. Hs.

. Shooting and creeping on the glans. S.

. Frequent erections even in the daytime. H.,X.

b. Chordæ seminales.

. DRAWING PAIN IN THE CHORDÆ SEMINALES (in 4½ hours). X.

975. Pressive and tensive pain in the testicles downwards, with pressive pain in the occiput (the 8th day). X.

c. Testicles.

. Drawing pain in the testicles. X.

. Stitch in the testes (the 5th day). X.,Hs.

. Pain in the right testicle (the 5th day). X.

. Drawing in the right testicle. S.

980. Drawing in the left testicle (it was crushed once some years before, which was followed by hydrocele, speedily removed). Kch.

d. Scrotum.

. Redness, heat, and swelling of the scrotum. On the following day on both sides there is here and there a raising of the epidermis from yellowish serum in flat vesicles of the size of a pin's head, and from that to a small lentil, painful to the touch. In the evening the vesicles burst and the red and swollen skin stripped of the epidermis discharges a little fluid. On the morning of the 3rd day the scrotum is covered with dry, thin, cracked, red scabs. On the 4th day the skin is normal again. R.X.

. ITCHING AND CRAWLING ON THE SCROTUM. X.,S.

2. *Female.*

. Itching on the vulva. T.

. Daily for 14 days, constant burning in the vagina at precisely the same hour, forenoon and afternoon (in 3 hours). N.

985. Menstruation set in 2 days earlier than usual, but more copious, without other ailments. F.X.

. Menstruation 4 days too early, and rather in excess, after vertigo, staggering, pricking itching pains in the head and limbs. F.S.

. Menses very copious (the 9th day), going on increasing for 3 days, about 4 days too late, with pains, lasting 7 days. Ng.

. A mucous discharge from the vagina for some days, colouring the linen yellow. F.X.

. Menstruation passing gradually into leucorrhœa (she had suffered from this previously). F.X.

NECK.

990. Drawing in the muscles of the neck. Lc.

. Pain in the front of the neck, extending towards the temples. L.

. Pain and STIFFNESS OF BOTH SIDES OF THE NECK on moving the head. Rr.,Kch.

. Pain in the muscles on the right side. Gs.

. Painful tension as if of a tendon on a strip of the neck (right side) towards the shoulder, in the afternoon when sitting (the first day). Ng.

995. Pressure on the left side of the neck. S.

. Quivering trembling movement on the forepart of the neck and over the larynx, intermittent. Rr.

. Strong tension on and in the neck over the region of the larynx as if it were constricted, whereby, however, the œsophagus alone is narrowed (in ½ hour). R.A.

. FEELING AS IF THE NECK WERE TIED ROUND AT THE LARYNX WITH A NAPKIN. X.,A.X.

. TENSION ON THE NECK CLOSE ABOVE THE LARYNX AS IF IT WERE COMPRESSED. X.,F.X.

LARYNX AND TRACHEA.

1000. Sensation as if the larynx were pressed from without on the œsophagus, whereby swallowing, not breathing, is rendered difficult (in 5 min.). R. A.

. Severe shooting in the larynx, with a constrictive sensation. Le.

. CHOKING SENSATION IN THE THROAT, aggravated by the breathing. Rr.

. *Pressure on the larynx.* F.X.,X.

. Pain in the larynx, with a feeling as if the neck were swollen externally (in 10 min.). F.X.

1005. Feeling as if the air could not pass through the larynx from a swelling there (in 10 min.) F.X.

. FEEL OF SWELLING IN THE LARYNX, especially on the right side. G.S.,X.

. On awaking from a dream which oppressed the respiration, a feeling as if the larynx and trachea were confined by a tumefaction, with tickling in the larynx, and short dry cough with difficulty of breathing, but no anxiety. X.

. Pressure, with sense of constriction in the trachea, mounting from the sternum towards the larynx. S.

. *Sense of constriction in the trachea with deadly anguish*, and a wish for eructation without success (at night on awaking). Hs.

1010. *Shooting pain in the throat and region of the larynx* (in 10 min.). A.H.

. Rapidly following stitches in the larynx towards the outside and inside of the throat (in 10 min.). F.X.

. Burning pain in the larynx. A.H.

. Scraping in the larynx, exciting a cough (the 3rd day). T.

. Excitation to cough in the larynx (in 2½ hours). F.X.

1015. SLIGHT HOARSENESS. A.H.,Hs.

. Frequent hoarseness, with dry cough. N.

. Pain in the larynx (in 1 hour). T.

. Heat mounting from the chest to the throat, quite into the larynx, for one hour. F.X.

. Feeling of heat in the trachea (in ¼ hour). X.

1020. Congestion of blood towards the larynx, with dull throbbing there. T.

. PESSURE IN THE TRACHEA. X.,Hs.

. Sensation of dust in the trachea, and throat, and behind the sternum, which could not be removed by cough. Hs.

COUGH.

. Infrequent slight fits of coughing, with spasms of the glottis on expiration. T.

. Dry hollow cough. T.

1025. Violent spasmodic cough. T.

. EXCITATION TO COUGH IN THE TRACHEA (in 2 min.). X.,P.

. Excitation to cough, with dry cough. Lc.

. Cough, with severe tickling in the larynx in the evening, forcing out tears. W.

. *Short dry cough* (in 2 min.), X.; (the 5th day). X.,F.X., A.X.

1030. *Continued dry cough*, in 2 fits, in quick succession. F.X.

. Short cough, with short breathing. K.

. *Frequent fits of short cough*, with stitches in the right side, and difficulty of breathing. F.X.,X.,F.S.

. Much *exhausting cough*, especially in the morning, *with much expectoration deep out of the lungs.* Hs.

. STRONG FIT OF COUGHING WITHOUT EXPECTORATION (in ½ hour). X.,Hs.

1035. *Cough with some expectoration.* A.H.

. Dry cough, lumps of phlegm being sometimes thrown out. N.

. *Pain in the larynx when coughing*, with pains in the chest and sacrum. F.X.

(To be Continued)

EDITOR'S NOTES.

CARBOLIC ACID AS A CEREBRO-SPINAL POISON.

Carbolic acid is one of the hobbies of the day, and it is well that those who are fond of it should remember that it is not simply a disinfectant, but an energetic cerebro-spinal poison. Mr. David Hamilton, Junior House Surgeon to the Northern Hospital, Liverpool, attributes, and we think justly, death from tetanus, of which several remarkable cases have been recently recorded, a few hours after the application of pure carbolic acid or a strong solution to wounds, to the action of the acid itself. He speaks of several instances of poisoning from the absorption of the acid having come under his notice. The symptoms were: conjunctivæ insensible; skin cold and clammy; face of a slightly livid hue; pulse slow and depressed; paralysis of the respiration; coma ending in death. We cannot too strongly deprecate the use of it in recent wounds, and, in fact, in any but sloughing and gangrenous sores, where the chances of absorption are reduced to the minimum.

REGENERATION OF THE EYES IN THE CRAB.

The subject of development and regeneration of tissues and systems and organs is one of deep interest not only to the physiologist, but no less to the physician. In proportion however to its importance, it is enveloped in mystery and uncertainty. Any fact or facts tending to throw light upon it is welcome. We therefore notice with pleasure the results of very interesting investigations upon the regeneration of the eyes of the crab, made by Mr. Chautran in M. Coste's Laboratory, which were recently communicated to the Academy of Sciences of Paris. Acording to these experiments—"If the eyes be excised in a crab of one year old, captured in August, just after moulting, they are completely restored, the new ones assuming the normal form and functions. If however the operation be performed in one taken in the month of May, before moulting, this process interferes with their due development, and they are regenerated of an irregular form and size. In adults the new organ is very imperfect." (*Lancet*, March 15). These as well as other facts show that the age of the animal exercises considerable influence upon the regenerative process, the more advanced the age, the less the regenerative power.

THE THIRD INTERNATIONAL MEDICAL CONGRESS.

We learn from the *Med. Times & Gazette* (March 29) that the Third International Medical Congress will be held in Vienna during the last six days of September next, while the Exhibition is still open. Delegates from Governments and from scientific Corporations, and all physicians and workers in the natural sciences, who shall have announced their intention of taking part in the congress previous to the opening day, will be admitted as members. The meetings will be public, and all members will be entitled to take part in the discussions and to vote. There will be no fee for membership. The following preliminary list of subjects has been drawn up by the Executive Comittee :—The questions of Vaccination, Quarantine in cholera, Prostitution, and Municipal Sanitation ; proposals for the introduction of an International Pharmacopœia ; and proposals in favor of introducing a complete conformity in the study of Medicine in all countries, and of a corresponding international right to practise professionally. Have the Indian Government thought of sending any delegates? The questions that will be discussed at the meetings of the Congress are especial interest and importance to India, and she ought not to be without a representative there.

ANALYSIS OF THE ASH OF CINCHONA BARKS.

The *Pharmaceutical Journal* for March 15 inserts an article on the Complete Analysis of Cinchona Barks from the *Repertoire de Pharmacie*, from which we take the following analysis of the ash ; the quantities of ash indicated being the residue of 100 grammes of the bark.

	Huanuco bark.		Calisaya bark.		Succirubra bark.	
Ash	1·831	1·885	1·350	1·361	1·402	1·741.
Insoluble silica	0·263	0·241	0·023	0·032	0·020	0·031.
Soluble Silica	0·041	0·047	0·024	0·031	0·025	0·018.
Alumina	0·061	0·050	0·030	0·020	0·062	0·052.
Iron	0·061	0·042	0·065	0·049	0·053	0·070.
Manganese	0·048	0·026	0·027	0·032	0·042	0·025.
Lime	0·376	0·383	0·382	0·379	0·546	0·720.
Magnesia	0·034	0·034	0·016	0·031	0·021	0·018.
Potash	0·429	0·540	0·340	0·252	0·215	0·298.
Soda	0·081	0·069	0·041	0·052	0·048	0·034.
Copper	traces	traces	traces	traces	traces	traces.
Carbonic acid	0·309	0·318	0·338	0·345	0·280	0·291.
Sulphuric acid	0·027	0·034	0·036	0·038	0·035	0·034.
Phosporic acid	0·074	0·053	0·048	0·067	0·045	0·042.
Chlorine	0·015	0·009	0·008	0·010	0·014	0·012.

SULPHUR-FUMES AS ARRESTOR OF CHOLERA.

Dr. J. E. Tuson relates (*Indian Med. Gaz.* April) that from the beginning of Dec. 1872 to about the 15th, cases of cholera were continually occurring in the Bazar, and occassionally in the cantonments, at Dinapore. On the 15th the outbreak culminating in 14 or 15 cases in one day, he had recourse to the following hygienic measures, which were strictly enforced :—" Wood fires were burned at 50 yards apart throughout the bazar, and powdered *Sulphur* sprinkled on them. A cordon of such fires was established between cantonments and the bazar; and as it was apparent that the disease had been imported from Patna, a cordon was placed between that city and the bazar. These fires were continuously burned during the 15th, and two days afterwards." Dr. Tuson says, "contemporaneously with the sulphur-fires being burned the cholera disappeared and for ten days after not a single case presented itself; and since Dinapore has been remarkably free from the disease."

Dr. Hering of Philadelphia, the greatest living disciple of Hahnemann, was the first to point out the prophylactic virtues of sulphur in cholera, not in the shape of fumes, however, but in that of powder to be placed within stockings or shoes. Dr. Tuson's experiment is worth trying wherever there would be an outbreak of the disease.

GLYCERINED VACCINE VIRUS.

Dr. Fleischmann, Physician to the Vienna General Polyklinik, thus summarises the results of his investigations on the above subject :—

1st. Lymph mixed with glycerine will keep better and longer than heretofore. While his own experience has not gone beyond three months and a half, other practitioners have used it with success after seven or eight months or even after two years.

2nd. As by this means the lymph can be multiplied within very broad limits, its utility, where large numbers have to be vaccinated, is very great. It dispenses with the necessity which otherwise may occur in urgent cases, of taking lymph from children whom we are uncertain about, or of taking it from re-vaccinated persons.

3rd. As the necessary quantity of lymp is more easily obtained, it is not necessary to inquire into the condition of health of so many vaccinifers, whereby much time is saved. Suspected children also, as well as those for whom the parents object, need not be resorted to for supplies.

4th. The lymph can be sent to long distances without the same fear of the effects of weather as is felt with respect to undiluted lymph.

5th. The employment of vaccine crusts may be entirely dispensed with; Dr. Peffard, of New York, having found that on several occasions, where these have been employed, contagious impetigo has complicated the vaccinia.

6th. If Bœck and Guntz's observations are confirmed—viz., that the contagion of syphilis loses its poisonous properties after remaining eight days in enclosed fluid—a further advantage attaches to the dilution of lymph with glycerine.

The proportions used in Prussia are—lymph one, glycerine two, and distilled water two parts, well mixed in a watch-glass.

CANINE MADNESS.

Dr. E. P. Philpots, of Poole, Dorset, in an article contributed to the *British Medical Journal* (March 8) on "Canine Madness when communicable and when non-communicable to man," has done eminent service to the profession and to humanity at large, by distinguishing between two species of canine madness, which, though presenting points of resemblance, present differences which render them absolutely distinct diseases, the distinction being of vital importance in so far as the one is communicable and the other not. The communicable disease is the true hydrophobia, and the non-communicable is only distemper-madness. The following are the differential characteristics in the words of Dr. Philpots :—

"In hydrophobia there is a dread of water, in distemper madness there is a longing for it. In the latter disease, there is a spasm of the œsophagus which the dogs tries to overcome by futile efforts to vomit. The premonitory symptom of hydrophobia is a sullen depression; in distemper-madness the throat-symptoms are first observable. Regarding the general appearance during the attack: the hydrophobic dog is a sullen animal, merely appears much "out of humour, and is only actually mad on the approach of water; but in distemper madness the animal really *is* mad in every sense of the term. He bites, and gnaws, and snaps, and chews anything that he thinks will cause him to vomit. The hydrophobic dog has *no* fits (except on the approch of water), and he does not foam at the mouth; but with the dog mad with distemper there is a succession of fits, one of which may end his life; his saliva, some of it of a frothy nature (foam), dribbles, and exudes from his mouth, and water sprinkled over him has no effect upon him. The hydrophobic dog hates the sound, the sight, the thought, of water; he will fly from it madly; but the dog mad of distemper rushes to it to assuage his thirst, but this he cannot do, as spasm of the œsophagus will not allow his swallowing. The hydrophobic dog's eyes are 'fishy,' dull, and sullen-looking; the dog ill of distemper-madness has bright green and savage-looking eyes, and he howls and barks. Dogs never recover from hydrophobia, but they do from distemper-madness, if the fits be not severe. Vaccination does not prevent hydrophobia, but it does distemper-madness."

NOTICE TO CORRESPONDENTS.

GOPAL CHUNDER GOOPTO. We do not question your authorship of the paragraph in the *Chikitsá Sangraha,* but is it not singular you did not acknowledge your obligations to Babu B. M. Sircar in the paragraph itself?

THE CALCUTTA MEDICAL COLLEGE.

We owe an apology to Dr. McLeod for not being able to notice till now his "History of the Medical Schools of the Bengal Presidency," which forms an appendix to his General Report on the Lunatic Asylums, Vaccination, and Dispensaries of the Bengal Presidency for 1870. The materials for this paper have been chiefly derived from the records of the Indian Medical Department, from papers published in the *Indian Annals of Medical Science,* from administration and other reports, and from information supplied by the principals of the different schools. The public have thus been furnished with many facts of importance in reference to the origin and growth of Medical education in Bengal. Dr. McLeod is already well known for his valuable and instructive report on the Medico-legal Returns of this Presidency for the years 1868 and 1869, and for his careful and intelligent analyses of the periodical reports on hospitals, dispensaries and other medical institutions in Northern India; and by his present contribution, to quote Dr. Brown, he has rendered valuable service to the cause of medical education in this country.

Interesting, however, as the paper is, being the first attempt of its kind, it is far from being complete and exhaustive, in as much as it contains both inaccuracies and omissions. It gives for instance a very interesting sketch of the working of the old Native Medical Institution, (the first medical school in British India), together with an account of the method of instruction pursued therein. But it omits to furnish a similar account of the medical classes which formerly existed at the Calcutta Sanskrit College and the Calcutta Madrissa. These classes were opened under the orders of the General Committee of Public Instruction, who were of opinion that some of the Sanskrit and Arabic works contained useful information, which might prove serviceable to the Medical officers in their practice of medicine. It is also known that the class attached to the Sanskrit College was placed under the charge of Dr. Tytler, and that Dr. J. Grant was appointed Anatomical Lecturer in 1831. Both these officers had left interesting reports on the working of the class, which must be remaining shelved somewhere, if they have not already been consigned with things that were. We hope Dr. McLeod will make an effective search for them, for it is not impossible but that they might teach us some important facts which might prove useful even now.

To the report is annexed a table containing the names of the professors who held office in the Calcutta Medical College from its foundation in 1835 till May 1872. It would appear from this table that there were no professors in Medicine, Surgery, Chemistry and Materia Medica before 1841; and yet we find from the body of the report itself that chairs of these important Branches existed in the institution from January 1837, and that separate courses of lectures on the last two subjects were regularly delivered from 1836. A little more carefulness on the part of the compiler would have made such omissions impossible.

Dr. McLeod takes notice of the state of Medicine and Surgery in this country at the time of the British occupation, and gives extracts from the valuable report of Dr. Francis Buchanan on the lamentable state of the Medical art in the greater portion of Lower Bengal about 1807. He makes the following observations on the Vaids and Hakims :—

> The practice of both these classes was, as might be expected, exceedingly crude and entirely empirical. They were ignorant of anatomy; their pathology was fanciful; their knowledge of, and power of detecting and discriminating disease limited; the medicinal agents at their command few; and in their application of these they depended entirely upon a rough, and often fanciful semeiology. In surgery they were equally ignorant and imperfect, though able to extract stones from the bladder, operate for cataract, and perform in a sort of way some few other simple operative processes, such as bleeding, cupping, or evacuating the fluid of hydrocele. The practice of these men was moreover largely tinctured with superstitious beliefs and observances, and charms and incantations constituted an important share of their pretended power over disease.

There is no doubt a great deal of truth in the above remarks, as applied to the generality of practitioners of the time referred to, but as applied to every practitioner following the Hindu and Arabian sytems of medicine, they are very far from correct. The most learned Kavirajs and Hakims, even of the present day, are the very opposite of superstitious; their knowledge of, and power of discriminating disease are *not* limited; and the medicinal agents at their command are certainly *not* few. We are compelled to say these remarks evince a lamentable ignorance of the systems animadverted upon, and we are sorry to find them proceeding from the pen of one, who occupies so respectable a position in the profession. If Dr. McLeod had perused with a little more care even his own authorities he would have found reason to modify to some extent at least the opinion he has chosen to give expression to on this subject. He would have learnt, for instance, from Professor R. O'Shaughnessy, that

> "In an early period of the history of Bengal, the exact date and limits of which it might be difficult to fix with precision, but which was certainly long anterior to the growth of true science amongst the natives of Europe, the old Hindu physicians both taught and practised dissection of the human body, as furnishing indispensable assistance to the study of the healing art, and knowledge of the structure of the human frame.
>
> The Medical Shastras are too clear on this point, for any question to be made of it. They contain minute directions for the choice of subjects, and for the management and disposal of them.

Dr. Eatwell also would have told him that "with much that is erroneous, it cannot be denied that this (the Hindu) system of Medicine and Surgery, of which the very date is lost in antiquity, contained a portion that was truthful and valuable." He would have further learnt a very useful practical lesson from the following extract from a communication of Dr. Tytler:—

> Without any serious comparison between European and Oriental medical science, does it not also sometimes happen, that after a surgeon has in vain exhausted his skill on a case, a Native practitioner as it were through a coup de main, cures it at once by a remedy, coarse indeed and rough, but which the event shows to be efficacious? That such instances do occasionally occur is too notorious to be denied.

The truth of the above remark must be readily admitted by all honest practitioners in this country. The fact of the matter is that as yet very little has been done to unlock the treasures which lie buried in old manuscripts, Sanskrit, Arabic, and Persian. We are indebted for what little is known of them to such men as Wilson, Wise and Royle, who in this undertaking received material assistance from the Vaids and Hakims employed bythem. The necessity of bringing to light the contents of these works, was seen by the General Committee of Public Instruction in 1826, but the measures, which lay in their power to adopt, were not sufficient to produce the desired result. The Committee on Native Medical Education, appointed by Lord William Bentinck, could have done much to further the object of the General Committee, but it is a matter of no small regret that they overlooked this subject altogether. The work thus left unfinished can now be continued by private enterprise alone. But the difficulties in the way are very great, and can hardly be overcome without some assistance from Government. We hope, however, that so long as this work is not completed, medical officers, like Dr. McLeod, will abstain from such indiscriminate condemnation as he has indulged in.

If there is anything for which we are under the greatest obligation to the British Government it is perhaps the establishment of Hospitals and Medical Schools in this country. As far as we have been able to learn, such institutions had no existence during the Hindu period, when the knowledge of medicine was transmitted from generation to generation by means of private instruction alone. During the time of the Mahomedans, Akber established at Agra a Medical School and Hospital, and Shah Jehan followed the example of his grandfather and created similar institutions at Delhi. The town of Hyderabad in the Deccan seems also to have had similar institutions. But there did not exist anything of the kind which we now witness in British India in reference to the subject under notice. The present progress in medicine and the construction of buildings in every town of importance for the accommodation of the sick poor, we owe entirely to the British Government. The importation of European medical officers into this country, almost dates from the time when Foreigners from the west first set their feet on India, and it is a matter of history how, on two occasions, physicians were instrumental in securing from the powers that then existed, important privileges for the late East India Company. The medical officers, who were first engaged in the service of that company, often found themselves in need of subordinate assistance, in their practice of the healing art, and native youths of some intelligence came into requisition. The arts of compounding and dressing were first taught, and "by degrees compounders and dressers came to imitate the masters in the art of detecting and treating disease." It was thus that "Native Doctors" first obtained admission into the subordinate medical service, after passing through an examination of a simple character and were appointed to the subordinate charge of regimental and civil hospitals.

Things remained in this state until 1822, when on the recommendation of the late Medical Board, a medical school was established in Calcutta with the view of imparting suitable education, both theoretical and practical, to the Native Doctors. Surgeon Jamieson, the then Secretary to the Board, was appointed its first Superintendent, and on his death in the next year, the office devolved upon Surgeon Breton. "The school was fairly opened in October 1824," the Superintendent prepared a vocabulary of medical scientific terms in the Roman, Persian and Nagri characters, as also several specimens of lithographed anatomical plates, and two skeletons were purchased from Messrs. Bathgate and Co. The Court of Directors however disapproved of the formation of the school, and objected to the appointment of the Superintendent chiefly on the score of the additional expense it involved. They first thought that 'native youths were incapable of profitably receiving instruction in a science whose terms and ideas were so foreign to them,' and it was not until three years after that they gave in on the strong representation of the Medical Board as to the success of the institution.

In 1826, the Superintendent obtained 4 monitors or assistants, of whom one was attached to the General Hospital for giving demonstrations in anatomy as opportunities offered; one to the Company's Dispensary practically teaching pharmacy and materia medica; one to the Native Hospital to act as a clinical instructor, and the fourth to assist the Superintendent in conducting the business of the School. The students used to receive stipends, the amount of which varied from time to time. At the outset the school did not much attract the native youths, but it soon became a very popular institution under the able management of Dr. Breton and his successor Dr. Tytler.

As the Vernaculars were the only medium for imparting instruction, great difficulty was experienced to make the students understand thoroughly what they were taught. Both the above officers were obliged to publish several books and pamphlets on the different subjects taught at the institution, and the system of tuition pursued was mainly practical. There were however several drawbacks which prevented the institution from becoming as useful as was expected, the chief of which was the inadequate provision for teaching practical anatomy, the key to the healing art. Although we gather from one of the reports of Dr. Breton, that even the Hindu students regularly attended and readily assisted in dissecting human bodies, the bodies of sheep seem to have been generally used for the purpose in question. This defect continued unremedied to the last day of the institution, and the Committee of Lord Bentinck justly remarked that the omission of practical human anatomy, " were there no other defect in the establishment, would of itself be sufficient to show the urgent call for a reform in the system."

In 1826 Dr. Breton remarked—

> "The grand object of the Native Medical Institution, if I judge rightly, is to diffuse amongst the natives, generally of Hindustan, medical knowledge according to European principles ; but the ostensible one is to educate Hindus and Mussulmans to enable them to fill efficiently the situation of native doctors in the civil and military branches of the service.

It will be seen from what have already been stated that the first object, mentioned in the above extract, was entirely lost sight of, and the second only imperfectly attained. Lord Bentinck satisfied himself of this, and hence the appointment of the Committee. The deliberations of this Committee terminated in a Government resolution, which His Lordship caused to be published a few days before his final departure from this country, and which sanctioned the establishment of the Medical College in lieu of the institutions previously existing, for the purpose of teaching " the principles and practice of the medical sciences in strict accordance with the mode adopted in Europe," and through the medium of the English language. It was not without much discussion, however, that the Committee could arrive at the final solution of the question of the medium of instruction.

They had to decide between the opinions of the Orientalists at this time headed by Dr. Tytler, and of the Anglicists headed by the Rev. Dr. Duff. The arguments of the latter, as might be expected, were cogent and prevailed, and Lord Bentinck, who must have perused about this time, the celebrated minute of Macaulay on education, experienced no difficulty in supporting the Committee's view. The College was opened on the 20th February 1835 with two professors, (a third was added in the course of a few months,) in a house adjoining the old Hindu College, and was shortly afterwards removed to the premises it now occupies and which was previously occupied by what was called the Petty Court Jail.

The most remarkable event of this time was the first attempt at the dissection of a human body with their own hands by the students. The day on which this was accomplished is justly considered a very important one 'in the annals of Indian Medicine,' but there exists a difference of opinion as to the exact date on which this was done. According to Dr. Harrison, the 10th of January 1836 was the day in question, and this has been reproduced by Dr. McLeod. But according to Mr. Kerr (and his authority was the first annual report of Mr. Bramley) the precise date was the 28th October. Then again, as to the person or persons who really deserve credit for having been the pioneers of dissection in this country, there exists some difference of opinion, which Dr. McLeod does not seem to be aware of. He implicitly quotes Dr. Harrison who mentions "Madusudan Gupta and a few courageous pupils." Dr. Harrison's authority was no doubt the Hon'ble Mr. Drinkwater Bethune who, to commemorate the act of the first dissection of the human body, presented the College with a portrait of the Pandit to be hung in the large lecture theatre. We have however records to prove that the praise bestowed upon Madu Sudan Gupta and the extraordinary honor done him by Mr. Bethune were more than what justice could accord him. We shall return to this subject in our next.

ON THE SOLVENT ACTION OF PAPAYA JUICE ON THE NITROGENOUS ARTICLES OF FOOD.

By G. C. Roy, M. D., F. R. C. S.,
Correspg. Member of the Glasgow Medico-Chirurgical Society.

Basing my experiments on the strength of a popular belief in India, I have arrived at results which are well worth recording.

These beliefs, though originally started and practised upon by the ignorant mass, are often pregnant with wholesome truths. To ignore or overlook them altogether is detrimental to the progress of science. For it was upon the evidence and experience of an ignorant body of milkmen that Sir William Jenner brought to light the protective influence of cow-pox on the human system. It is the practice amongst the native cooks in India to add a few drops of the milky juice of the plant under consideration to tough old meat to make it tender and supple. Four years ago, anxious to ascertain whether any such virtue really existed in the plant, I added a few drops of the fresh juice to a pound of minced goat's meat and stewed it over a slow fire. To my surprise the whole ran into a diffluent mass in 5 minutes, owing to a larger quantity of the juice having been used on the occasion than is necessary to make it tender and eatable. Since then I had no further opportunity to test its property until I went to England, where I carried with me a quantity of the juice obtained by incising superficially the unripe fruit and drying it in the sun. Through the kindness of Dr. Parkes, the esteemed Professor of Netley, I was allowed the opportunity to carry on the experimental research.

The plant belongs to the natural order Papayaceæ and is termed Carica Papaya. It is indigenous to tropical climate and has a rapid growth, consisting of an unbranched stem from 10 to 12 ft. high surmounted by large deeply palmated stalked leaves. The fruits or pepos are edible both in their ripe and unripe state. The former are used as dessert and the latter cooked as vegetable. The fruit is about the size of a melon with a green rind enclosing a sweet delicious pulp in which innumerable seeds of about the size and appearance of black pepper are imbedded. The plant grows extensively in Bengal and all over India, and bears fruit once a year.

Incisions on the stem or breaking off the leaf from its joint yield a few drops of thin milky juice, but an abundant flow of it can be obtained by scarifying the unripe fruit in the same way as the poppy capsules are treated. The fluid is liable to decompose especially in hot weather if kept over for a few days, and hence it should be dried in the sun in shallow dishes and stored for use. One ounce of the juice can be obtained in an hour's time from the fruits of a vigorous plant. The dried stuff is of a yellowish white colour, hard, friable, and has a peculiar smell. Two drachms of this beaten up with one ounce of water will, I believe, give the approximate proportion of strength of the original liquid. At the risk of being tedious, I will give the details of the experiments as they were noted down at the time.

April 30th, 1872. Thermometer 66°.

The juice was obtained on 20th Dec. 1871 *en route* to England. A solution of it was made of the strength of one gramme to 3 c. c. of distilled water. Two pieces of fresh lean beef, each weighing 10 grammes, were taken, finely minced, and put in two separate cups. Whilst to the one 10 c. c. of distilled water were simply added, to the other one c. c. of the made-up solution, mixed up with 9. c. c. of distilled water. The two were boiled for 5 minutes. The medicated piece became soft and half dissolved in the fluid, whilst the meat in the other cup remained tough and unchanged.

Another piece of the same meat, of the same weight, was moistened in lump with 1 c. c. of the solution, and kept over for the next day's observation.

1st May.

The superficial portion of the lump was soft and gelatinous, making the piece very slippery to the touch ; when cut up into pieces, and a little more water added, the whole became pulpy in an hour's time without the aid of heat.

The animal, from which meat for the above experiments was taken, was killed on the 28th April, the Thermometer standing at 66°.

Another experiment was made the same day to confirm the result which was equally successful.

Two of the cups, one containing medicated, and the other unmedicated pieces of meat were kept under cover by Dr. Parkes, to note whether the solution had any power to retard decomposition.

2nd May.

Decomposition had commenced in both the vessels, but it was more advanced in the cup with papaya solution.

27th May.

A fresh solution was made (1 gramme to 20 c. c. of water) and the following experiments were tried.

In 4 separate dishes, beef, hard boiled white of egg, freshly prepared moist gluten, and arrowroot, each 10 grammes in weight, were treated with 2 c. c. of the solution and 8 c. c. of distilled water. To make a standard for comparison, the same articles of similar weight were digested in 4 other dishes with 10 c. c. of distilled water only. The whole kept over till next day without heat.

28th May.

The dish of meat with papaya juice soon became gelatinous on being stirred with a glass rod. The albumen of egg was soft, and when washed, broke into a uniform pulp. The gluten specimen was soft on the surface, and its superficial layer dissolved in the fluid giving it a slight turbidity. Arrowroot was dry and visibly unchanged.

The dishes with water were unaffected, the meat fibres remained without change. The egg when broken up remained lumpy. The gluten was clear, and even when it was worked up with the finger, did not give the liquid the least turbidity. The arrowroot dish was moist but without any change.

It should be remarked that the dish of meat and of albumen contained more fluid than the corresponding ones with water; whilst the arrowroot dish, which was unaffected in both instances, was dry in one and moist in the other.

All the dishes were preserved for further test.

29th May.

Both the dishes of meat were eaten away by a cat which grew exceedingly fond of it. The whole of gluten was dissolved in the solution, whilst the dish with water was yet unchanged. Each of the cups was mixed up with 50 c. c. of distilled water and left over for next day.

30th May.

The contents of the cups were filtered for test. The two arrowroot solutions gave no reaction when tested with Fehling's solution for sugar. The albumen with papaya was fast undergoing decomposition, and had an offensive smell. When filtered, nearly the whole of it passed through the filter, was clear, and decidedly acid. It gave no precipitate with heat, or heat and nitric acid or ferrocyanate of potash.

The watery specimen of albumen, when filtered, left behind a quantity of residue. The filtrate was milky in color and neutral in reaction, and gave a slight precipitate with each of the reagents, heat, nitric acid and ferrocyanate of potash. The gluten solution in papaya passed through the filter leaving merely a trace behind. The solution was tolerably clear and acid, and gave an abundant precipitate with heat, more than ¼ was coagulated with heat and nitric acid, and some flocculi formed with ferrocyanate of potash. The precipitate with heat was insoluble in liquor potassæ.

In the watery dish of gluten very little of the gluten was dissolved, the lump was still sticky. The watery solution was clear and strongly acid and gave no precipitate with any of the reagents. Nitric acid made the solution clearer than before.

3rd June.

Solution of the strength of ½ gramme to 10 c. c. of water.

As this was kept over for some days before use, it was found to have lost its acid reaction and settled itself into two parts, the clear liquid above and a sediment below. The clear supernatant liquid gave the same reaction with a piece of meat, showing that the digesting agent was soluble in water. A standard preparation of meat with water was made at the same time.

5th June.

Both the dishes were mixed with 50 c. c. of water and left to filter through.

6th June.

Decomposition had somewhat advanced in the papaya dish, whilst in the watery dish there was no sign of putrefaction. 10 c. c. of the papaya filtrate was dried in a porcelain crucible in a hot air bath and 10 c. c. of the watery filtrate was treated in a similar way. The quantity of solid dissolved in the papaya filtrate weighed 2 grammes whilst in the watery filtrate it was ·09 grammes.

Another equal quantity of each filtrate was tested in a test tube with heat and nitric acid, and it confirmed the result that the albumen dissolved in one was more than double the quantity in the other.

A piece of gelatinous meat charged with papaya juice was examined next day by Dr. Welsch under the microscope. It swarmed with vibriones in active motion. As for the muscular fibres the disintegration was complete, the sarcous elements loose, and those fasiculi that were yet entire were just separating themselves into ultimate particles. The digestion could not have been more perfect.

As very little solid stuff was left for further research, the remnant was reserved for chemical analysis.

A solution of the strength of 1 gramme to 30. c. c. of distilled water was prepared and filtered. Reaction distinctly acid. A portion was heated to dryness in a crucible. The vapor did not redden litmus, but the concentrated solution became more strongly acid and remained so when thoroughly dried. A little more heat charred the side of the capsule. When incinerated the ash gave an alkaline reaction. A deep precipitate was obtained on boiling. The coagulum was strained and a portion treated with the following reagents. Nitrate of silver gave a white precipitate soluble in ammonia and acids. No precipitate with chloride of calcium cold or boiled. No change of color with perchloride of iron. A white cloudy precipitate with liquor potassæ and the same with chloride of barium.

Remarks.

The above experiments in detail conclusively show the solvent action of the juice on all nitrogenous articles of food. Its effect in making the meat tender has been noticed in several botanical works, East and West Indian, but, so far as I have been able to collect, no systematic experiments have been made up to the present to test its virtues medicinally. Some have contented themselves with merely mentioning the practice of the natives as alluded to above, and some West Indian authors have ascribed to the plant the power of hastening decomposition in dead animals, so much so that they go the length of asserting that a joint of meat suspended under its branches will fall to pieces when cooked. Nay, the belief in the West Indies is so strong in its power of hastening decomposition that it is said that live animals fed on the unripe fruit will not keep long after death. That there is a considerable power of disintegration inherent in the plant is established beyond doubt and cavil. But the question is, what is its peculiar nature? Is it chemical or dynamical? Is it like the yeast a fermenting agent, the presence of which in dead animal substances destroys the stability of their composition? or are the solution and disintegration allied to natural digestion, and are the results of chemical change? If the former, there is a valuable discovery of a nitrogenous ferment which stands in the same relation to protein compounds as yeast does to starch. The conversion of insoluble starch to soluble substances constitutes the process of digestion of amylaceous principles of food in our stomach, and this conversion is chiefly assisted by an animal ferment, ptyaline, that exists in the saliva. The digestion of nitrogenous principles is mostly a chemical process in which the gastric juice plays an important part. The rapidity and completeness with which the papya juice acts on meat when aided by high temperature surpass all artificial digestive processes on record. The smallness of quantity required to bring about the change negatives the assumption of any caustic virtue in the plant. Besides, I have put the fresh juice on my tongue and applied it to the skin without any irritant effect. I was at first inclined to believe the solvent action was due to some fixed organic acid either tartaric, citric or malic, as will be seen from the records of analysis, but I have failed to arrive at any definite result. The disintegration takes place too soon to be the effect of mere putrefaction. The moving vibriones observed under the microscope were no doubt generated by keeping, and were not the cause but the effect of disintegration. In all putrefactive changes these are looked upon as the initiators of the process. But inasmuch as the boiling temperature which destroys the existence of vibriones hastens this peculiar change, it is fair to suppose that the solvent action is something different from putrefaction. Besides, no reagent has yet been able to bring about putrefaction in fresh meat in 5 minutes. The fruits in their ripe and unripe state are edible and quite harmless.

The digestive agent is not acid, for the reaction is too feeble and even when long keeping makes it ammoniacal and neutralizes the acidity, yet it retains its peculiar virtue. The solvent principle is soluble in water. Coagulated albumen dissolved by it will not coagulate again with heat acquiring the property of albuminose. Gluten is thoroughly dissolved and can be reprecipitated.

The whole action is so identical with healthy digestion that I wonder we have not availed of this medicinal property in the cases of invalids and in dyspepsia to substitute a process of artificial digestion. A few grains taken immediately after meal will substitute the power where it is wanting. I have not tried it in any case internally, but from its effect on the cat which grew so fond of it that it became a task to prevent its depredations, I believe it is harmless. My attention was also directed to discover whether it could be utilized in preparing some thing like a liquid extract, but its liability to decomposition is a bar to its use. Further investigations are yet wanting to establish its repute, but as far as they have been gone into, the result is highly encouraging. I intend to resume my investigations as soon as I am relieved of my present arduous work, which leaves no time for experiment.

CLINICAL RECORD.

A case of Sloughing Dysentery.

REPORTED BY AN L. M. S.

A Hindu lady aged 28, in the 7th month of her gestation, complained of pinching in the abdomen attended with some difficulty in passing water, about the latter end of March 1873; for this she consulted a neighbouring medical practitioner who advised her to take Dover's Powder, which would give her relief for some hours whenever she took the powder. But this relief was only transient and in a short time the following symptoms developed themselves: Agonising aching around the umbilical region and the rectum with burning during micturition; tenesmus; frequent stools consisting of white mucus spotted with blood, about 12 in 24 hours; fainting after every 4th or 5th evacuation. The attending physician thought of giving Hom. medicines in preference to Allopathic, and prescribed Aloes 3rd, which rapidly removed the fainting and the spasmodic proctalgia, but the other symptoms, viz., the tenesmus, the difficulty in voiding urine, and the nature and frequency of the stools remained unabated; and a short while after, the burning during micturition increased to such a fearful extent that she screamed before and during urination, which was emitted in drops. For these Canth. 3rd, Colchicum 6th and Merc. cor. 3rd were given in succession without any apparent benefit. Consequently on the 3rd April, Babu Dinabandhu Mookerjee (an Amateur Hom. practitioner of the place) was called in consultation. He found her with the following symptoms: severe prostration, pulse feeble, passes 50 to 60 stools during 24 hours, gets fever at 2 p. m. which lasts during the whole night, burning over the whole body and in the abdomen. Stinging pain in the urethra before and during micturition. Urine high colored. He prescribed Ars. 30, 3 glob. every 3 hours. April 4th; less weak, burning in the urethra much relieved, but the stools and the other symptoms continued much as before. Ordered the same med. to be continued. April 5th; had a convulsive fit at 9 a. m. on attempting to void urine. Severe burning and stinging in the urethra. Had 20 stools consisting of mucus and blood during the previous night.

The husband of the lady, who had very little faith in Homœopathy, called and insisted me now to prescribe for her Allopathic medicines, alleging that homœopathy, if it at all cures, will cure very slowly, but as the disease was very virulent it should be checked soon. However, I prescribed not without hesitation a mixture containing Chloric Ether, Decoc. Cinchona and Vin. Ipecac.

This apparently relieved her but only for a short time, after which the symptoms all on a sudden became aggravated to a fearful extent. She passed every 15 minutes large quantities of stool consisting of pus and blood with severe stinging pain in the urethra. Faintings every now and then. Severe restlessness with nausea and thirst. But above all, the suppression of urine and the stinging pain in the urethra, were the most tormenting of all the symptoms.

Under these circumstances a friend of mine who treated the lady at the commencement of the disease was again consulted and he prescribed Merc. Cor. 3rd, which, however, had no effect either on the stools which now became involuntary, or the urinary difficulties and the tormina, all of which troubles had now attained their acme. The case was now considered pretty near desperate, and Babu Dinabandhu Mookerjee was again called in at 6 p. m. when he noted the following symptoms.

8th April. Hysteric convulsions every 5 minutes with entire loss of consciousness. In the intervals, which were very short, she complained of severe stinging pain in the region of the bladder, after which she became insensible and commenced to moan fearfully. In fact, a more pitiable picture of torment and sufferings could hardly be imagined. He gave her a dose of Camphor immediately and ordered the same to be held under her nostrils, from time to time until the fits were less frequent, as other means were not at hand, his medicine repository being about a mile distant from the patient's house. The next medicine he thought of was Apis. Mel. 6, which he was induced to prescribe by the stinging nature of the pain in the bladder (which in fact was the starting point of most of her troubles), the convulsions and the great soreness of the abdominal walls, to all which he said Apis was homœopathic. However, this medicine acted like a charm, for nearly a quarter of an hour after the first dose she passed, with little or no pain 3 poahs of urine, and she reported herself almost cured. After 6 hours she had another discharge of about a pooah without any perceptible pain. Thus from this time the disease was shorn of one of its most painful symptoms which had troubled her from the commencement.

9th April. Has no urinary troubles, but she is passing pus and blood involuntarily, the anus remaining open all the while. The stools, which were now carefully examined, were found to contain, besides pus and blood, detached shreds and pieces of slough. They were at the same time extremely fetid and of a brownish color. Extremely prostrated. Pulse full and very quick. The tenesmus and the tormina are now no more complained of, most probably from paralysis of the colon and rectum. Thirst, nausea, water runs down with audible gurgling, urine clear and watery; stools every 5 or 6 minutes, a spoonful only at a time, tongue coated blackish.

Prescribed Phos. 30 every hour, with, however, hardly, any hope of recovery of the patient. But contrary to all expectation the improvement was perceived even after the first dose, and it went on rapidly and steadily.

April 10th, morning. The attendants of the patient could not state the exact number of evacuations, but they said that they might be counted at 40, in place of about 140, during the same space of time. The fever was not so severe last night as before; same med. continued.

10th April, evening; had 28 evacuations during the whole day. I examined the stools and found feculent matters with the still bloody stools, and anticipated a favorable prognosis of the case. Fever very much abated.

11th, morning; during the previous night she had 20 stools. No nausea. Thirst less urgent, same med. cont.

12th. Continues to improve. Had 27 stools during whole day and night; same med. every 4 hours. Unfortunately the improvement was unexpectedly checked by the premature delivery of a boy. The child lived 6 hours and then expired, but not of dysentery.

13th. Had 35 bloody stools during the last 24 hours; had a slight fever in the evening. Lochial discharges rather profuse, considering the weak state of the patient. Same med. cont. every 3 hours.

14th. The blood in the stools more profuse in the morning: Lochical discharge continues unabated. Had 30 evacuations. Same med. every 3 hours.

15th. Had 16 watery diarrhœaic stools, mixed with blood and flakes of mucus. No more fever. As the diarrhœaic stools were characteristic of Phos. Babu D. N. M. attributed them to an over-action of the medicine and ordered simply Sac. Lac. in its place.

16th. Much better in every respect. Lochical discharges less profuse. Sac. Lac. continued.

17th. No diarrhœa, had ten stools, foamy and of a pale yellow color during the last 24 hours, but continues well in other respects. Sac. Lac.

18th. Lochial discharge profuse and painful. Had three stools from 6 to 10 a. m. the first diarrhœaic and the other two sanguineous. Had a chill and fever in the previous noon. Sulph. 12.

19th. Had only one more stool last evening and on the present morning; nearly normal. Had no fever.

20th. Passed a perfectly normal stool. No fever. Appears all right, only still very weak. Stopped the medicine.

From this time forward she continued to improve rapidly without the slightest recurrence of any unpleasant symptoms. The diet, during the whole course of the disease, consisted of barley water and thin broth, and latterly of broth, and milk and sago.

Gleanings from Contemporary Literature.

THE ACTION OF DRUGS.

By WILLIAM SHARP, M. D., F. R. S.

(Continued from p. 76.)

5. *Drugs have been studied mechanically.*

The aberrations of the human mind have been strange, but few have been more strange than that which led physicians to apply the mathematical principles of mechanics to the primary phenomena of living beings; to such actions, for example, as the circulation of the blood by the heart, and the production of the various secretions by the glands.

Men were drawn aside into this path of error by the notion, which has prevailed in all ages, that the progress of medicine is dependent upon the progress of science. Dr. Quincy, a great promulgator of the mechanical doctrines, and the most popular English medical writer of the last century, says :—

"The study of medicine has in all ages been influenced by the philosophy in vogue, because the theory thereof is inseparable from a good competency of knowledge in natural causes. ... ...

"I say physics (physical science) and medicine, because the latter cannot subsist without the former. . . ..

"And because what is brought from physics and mechanics takes up so much room here, it may be necessary to inform the reader that there is no knowledge in medicine but by such means. Experience without theory will never make a physician. ... .

"If there be anything of science in medicine, it is conducted by demonstration, because conversant with objects cougnizable only by the evidence of sense; but without this it is chance and confusion, and the enthusiast and the empiric are upon as good a foot as the scholar and the physician."*

This opinion is still adhered to in our time. The conviction is thus expressed by Professor Acland :—

"A profession dependent on science must vary with that on which it depends, and if it does not advance with the advance of science, that fact proves it to be in error."†

I am not of this opinion, but believe that the prevalence of it has been a stumbling-block in the way of the real improvement of medicine. This improvement can be brought about only by the study of medicine *per se;* by its workmen quarrying in its own mine. It is not necessary to depreciate any branch of science, and the physician may gladly admit that occasional assistance of a valuable kind may be got from collateral sciences, and further help may be expected as these make further advances; but not one of them can be made a safe peg to hang medicine upon. We have seen how true this is of chemistry. We shall now see that it is equally true of mechanics.

And that not for want of the devotion of talent and labour. The iatro-mechanics of the 17th and 18th centuries, like their predecessors the chemists, were men of great ability, and they took incredible pains in the direction of their remarks. Borelli, professor of mathematics in the University of Pisa, the founder of the school, Baglivi, called the Roman

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* *Lexicon Physico Medicum,* by John Quincy, M. D. 9th ed. 1775.

† *Medicine in Modern Times.* Discourse II. by Dr. Acland. 1869.

Hippocrates, and the illustrious Boerhaave were a noble triumvirate on the Continent; nor were Dr. James Keil and Dr. Richard Mead mean representatives in England.

It has been readily admitted that chemistry gives the physician very interesting information. It is as readily conceded that mechanics do the same. That the size, form, strength, and situation of bones, and the number, position, power, and insertion in or attachment to the bones of muscles, are regulated with infinite skill upon mechanical principles, cannot be doubted. But the attempt made by these eminent men to apply these principles was far more ambitious than this. All the vital processes of the living economy were explained by mathematical formulæ; diseases were an excess of relaxation, or an excess of tension; and drugs acted vigorously, according to the laws of mechanics, by their spicula and angles, and by their gravity.

To carry out this mechanical hypothesis a vast variety of geometrical diagrams and algebraic formulæ are given. Some of these measure the power of the muscles, others estimate the force of the heart in the propulsion of the blood, others calculate the work done by the glands in the production of their secretions, which is "performed by a composition of two motions, direct and transverse."

Borelli's demonstration of the power of the heart's action brings him to the conclusion that its exercise is equal to the pressure of 180,000 lbs. weight to move 20 ℔s. of blood.

Keil gives two different calculations, founded upon two different sets of experiments. The result of one is that the heart's force is equal to 5 oz., and of the other that it is equal to 8 oz.

The outrageous divergency between the demonstration of Borelli and that of Keil arises mainly from the different data taken by each. Borelli treats the column of blood as stationary; Keil as already in motion; "which, how it first came by," says Quincy, "seems out of human capacity to determine."

The difficulty of ascertaining the data from which to commence calculations, which is here made apparent, is a "glaring instance," in the words of Lord Bacon, of what will always be an absolute hindrance to any useful application of mathematics to these subjects. For a mathematical demonstration which shall be reliable, the data must be few and certain. In physiological questions, such as those we are considering, they are not only numerous, but very imperfectly ascertainable, a consideration which should have been sufficient to deter men from pursuing this path.

That the necessary data are too numerous, and of too uncertain a character to be successfully managed by geometry and algebra will be very evident, if the experiments of Keil are briefly related.

"Having uncovered the iliac artery and vein in the thigh of a dog, near to his body, and having passed convenient ligatures under them, he opened the whole diameter of the vein, and received into a cup all the blood which ran from it in the space of ten seconds of a minute; after that the same was done by the artery for the same space of time, and both the quantities of blood were exactly weighed. ... ... This experiment was repeated, until the quantity of blood which runs from the artery, to the quantity of blood which runs from the vein, was found to be, in the same space of time, nearly as seven and a-half to three.

"Now, the velocity of the blood in the iliac artery, so near the aorta, is nearly the same as that in the aorta, and consequently the velocity with which it flows out of the iliac artery cut assunder, is the same with which it would flow out of the heart unresisted; or the blood runs through a wound in the iliac artery with all the velocity it received from the heart. Now, all the blood which runs along the iliac artery returns again by the iliac vein, and consequently the quantities of blood which pass through both, in the same space of time, are equal. The quantity of blood, therefore, which runs out of the iliac vein cut assunder, is the same which runs through the iliac artery before it was cut, in the same space of time. Having therefore the quantity which runs through the iliac artery when it is cut and when it is not cut, we have their velocities. ... ...

"Now, if the heart throws out two ounces of blood every systole (as is most probable), then the blood moves through the aorta at the rate of 156 feet in a minute, and, therefore, the absolute velocity," &c.

The mathematical part I need not repeat; it is worked according to the second corollary of the 36th Proposition of the 2nd book of Newton's *Principia.*

The second series of experiments was founded on the properties of the *parabola.* "Upon opening the iliac artery of a dog laid in an horizontal direction, and 28 inches high from the ground, he found that the blood moving in parabola A. F. C. touched the ground at C., which is about three feet distant from the perpendicular A. B. let fall from the heart." ... ... The reasoning then gives 1⅓ of an ounce-force of this dog's heart. "Now, the heart of this dog weighed two ounces; and *hearts being to one another as their weights*, and *supposing* that the weight of an ordinary human heart is 12 ounces, then its force will be almost equal to 8 ounces."

It cannot be necessary to point out how uncertain many of these data are, or how wide of the mark any calculations depending upon them may be. But, besides these, there is one datum strangely overlooked by all these eminent physicians, which, of itself, is sufficient to paralyse every effort in the direction of geometry as applied to living beings. This is the energy of *life*, an energy which admits of no calculation. Though the power of life has limits of its own, it ranges itself outside the boundaries of mechanics, and entirely refuses to submit to be measured by mathematics. Think of the living heart of a body strapped down to a table, and whose iliac artery is cut assunder and is bleeding it to death! Who can calculate the force of its convulsive beats? Who can even compare them with those of the same heart in a state of rest and peace? And how can the force of a *living* human heart be known to be to that of a dog's *living* heart, as the weight of one when it is dead is to the weight of the other when it is dead? Vain, indeed, is such science as this!

But, it will be said, this is physiology, and it behoves us to return to our subject, therapeutics.

The same mechanical principles were applied to all medicinal substances. Dr. Quincy, in his *Dispensatory*, a book as popular as his *Lexicon*, makes this application throughout. Let me give one example and copy what he says upon *iron.* After speaking disparagingly of the astrologists and the chemists, he proceeds:—

"We shall therefore inquire by what manifest properties this metal comes to afford so much of moment (momentum) in medical preparations. And to this purpose thus far in common may be concluded, as from all other metalline particles, that such as can be mixed with the blood and made part of the circulating fluid, must, of course, by the necessary laws of motion, from their superior gravities, be of great force to break their way where particles of less gravities cannot get through. For mechanics teach nothing more plainly than that the momenta of all percussions are as the rectangles under the gravities and celerities of the living bodies. By how much more gravity, then, a metalline particle has, more than any other particle in the blood, if their celerities are equal, by so much the greater will the stroke of the metalline particles be against everything that stands in its way than of any other not so heavy; and therefore any obstruction in the glands and capillaries will be sooner removed by such particles than by those which are lighter. *This is a way of reasoning which is plain to the meanest capacity.*

"But, if *iron* has this property by virtue of the specific weight of its particles in common with some other metals, it has also a further advantage of being a powerful deobstruent, from the shape of its component parts; for both our taste and sight convince us of their pointed angular forms, especially if we view them in their shoots or crystals, in making the *vitriol* or salt of iron. [illegible] from the sharp and pointed figures of the particles of iron, will they be efficacious to cut their way through many hindrances."*

This is doubtless a sufficient illustration of the mechanical theory of therapeutics of the eighteenth century. But let me also remind my readers of one of the essays of Dr. Mead. It is the first in his collected works, and is entitled "A Mechanical Account of Poisons," first published in 1702, and finally in 1747. It contains original experiments with the poison of the viper, the "saline spicula" of which do all the damage, in the first edition by pricking the blood, and in the latest edition by pricking the "nervous fluid."

The "Aphorisms" of Boerhaave have much in them of the same mechanical type. He treats first of "the diseases of a simple solid fibre"; then of those "of a weak and lax fibre"; then of those "of a stiff and elastic fibre."

This leads me to a final remark upon the views and principles of these famous men; they were distinguished from those of the ancients, which were humoral, by the prominence given to the solids of the body, and from those of their immediate predecessors, which were chemical, by their mathematics and mechanics.

A few years ago it was said of these mechanical speculations that they exist only in history. This cannot be said now, for they have been strangely revived in our time. It will be necessary, therefore, to notice this revival, and the Essays of the Rev. Professor Haughton may be taken as the representatives of this "school of thought."

Medicine in Modern Times (1869) contains a discourse "on the relation of food to work," or, "on physic in relation to medicine in modern times," which puts the views of this school very accurately before us.

A few extracts will show what these are:—

"Man and other animals possess a double life, animal and organic, presided over respectively by two distinct though correlated centres of nervous force; of these, one thinks, moves, and feels; the other merely cooks, receiving the food supplied, changing and elaborating it into elements suitable for the use of the animal life." ... ...

"In the higher forms of animals, and more especially in man, the animal life dominates over the organic life, which becomes its slave, and exhibits the remarkable phenomena of mechanical force, of geometrical instinct, of animal cunning, and, finally, in man himself produces intellectual work, rising to its highest form in the religious feeling that recognises its great Creator, and bows in humility before him. It is a simple matter of fact and of everyday observation, that all these forms of animal work are the result of the reception and assimilation of a few cubic feet of oxygen, a few ounces of water, of starch, of fat, and of flesh." .. ...

"The food consumed in twenty-four hours, including air and water, undergoes a series of changes of a chemical character before leaving the body, in the form of one or other of its excretions. Some of these changes develop force, and others expend force, but the algebraic sum of all the gains and losses of force represents the quantity available for work. This work must be expended as follows:—

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* Quincy's *Dispensatory.* 10th ed. 1736.

1. The work of growth.
2. The work of maintaining heat.
3. Mechanical work.
4. Vital (intellectual) work." . . . . .

"Let us take, as illustrations, the muscles and brain, regarded as the organs by means of which mechanical and intellectual work is done. These organs resemble the piston, beam, and fly-wheel of the steam engine, and like them only transmit or store up the force communicated by the steam in one case, and by the products of the food conveyed by the blood in the other case."

Then follow nearly fifty pages of mathematical calculations on the several relations between the food taken, the air breathed, and the work done.

To my mind such calculations as these, when supposed to represent the sum of vital phenomena, are a delusion, and as great a delusion as that which misled the talented physicians of the last century. In proof of this the following observations are offered :--

It is required for the solution of a problem by figures,

1. That all the factors be included.
2. That all admit of being numbered, measured, or weighed.
3. And that this numbering, measuring, and weighing has been accurately done.

Now, not one of these indispensable conditions has been fulfilled in Prof. Haughton's calculations.

1. The data, elements, or factors, in living operations, are too numerous for all of them to be taken into account. Moreover, the one which is the most essential, namely the vital force or life, is wholly omitted.
2. This vital force refuses to be either counted, measured, or weighed.
3. And even the counting, measuring, and weighing of those elements upon which the calculations are actually made, are at the best only approximations, falling more or less short of accuracy.

All this is true of calculations based upon experiments made upon animals. In man another element presents itself, and one which exercises a mighty power over the body, and the action of its several organs. This is the MIND, in its double influence, by its intellectual and its moral faculties. Hear what King Harry said to Cardinal Wolsey :—

"———Read o'er this,
And after, this, and then to breakfast, with
What appetite you have."

It should be gratefully acknowledged that the information which is obtained by such pursuits as those of Prof. Haughton, when confined within their proper limits, are highly interesting, and sometimes of value. But they are worse than useless when they are ambitious of representing the circle of living phenomena.

Mathematical calculations may be applied to the action of muscles and bones where the elements are few, and the mechanical arrangements are obvious. When, therefore, Professor Haughton undertakes to prove the following propositions, he may be more safely listened to :-

"1. Each muscle is constructed in relation to its joint, in such a manner as to perform one kind of work only, and it performs that work to a maximum advantage.

"2. The number of muscles employed is determined by the number of distinct actions required from the limb.

"3. The shape and form of the bones employed are the necessary consequence of the shape and power of the muscles in action.

"4. The smallest muscle in the combination is as carefully adapted to its conditions of maximum work as the largest muscles."*

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* *British Medical Journal,* April 20, 1872, page 416.

These, no doubt, are propositions in mechanics, to which mathematical calculations may be applied. But when these muscles contract, and these bones are moved, a force comes into play, which sets all calculations at defiance. For it must be borne in mind that every movement is dependent upon, and is regulated by the presence of *life*. This is a force which is absolutely unmeasurable by any methods we possess.

The "necessary consequence" which Prof. Haughton says follows from these propositions is—

"That a foreseeing mind planned the type of the limb and of its actions."

This remark brings to my recollection a charming Essay on *The Pleasures of Science*, written nearly fifty years ago, by Lord Brougham ; in which he gives, as examples proving this "necessary consequence" (among many others which I have forgotten), the curve of the head of fishes, this being the solid of least resistance ; and the hexagonal form of the cells of a bee-hive, and the roof and floor of the hive ; these being formed upon the truest mathematical principles.

On other living processes, or vital work, such, for example, as respiration, all that can be truly said is, that during this process certain chemical changes take place, which it is in our power to examine qualitatively, and to some extent, quantitatively ; and also certain mechanical actions are performed, which we can observe, but cannot measure their force. So, in the living process of digestion there are chemical changes, and there are mechanical actions ; but neither respiration nor digestion can be defined as a chemical or as a mechanical opperation.

Prof. Haughton goes on to apply the physical "theory to diseased conditions of the body." I must not follow him in his details. Difficulties and objections, like those we have considered in physiology, but in increased degrees, will be found ; and the practical excesses which have resulted from the adoption of such views, show how mistaken and dangerous they are. The "furnishing of fuel in the form of wine and beef-tea" in fevers, to the extent to which it has been carried, may be mentioned as an example.

The application of similar calculations to therapeutics and the action of drugs, has not, so far as I am aware, been yet made in our time.

The mention of "fuel" makes it almost necessary that something should be said upon "innate" or "animal heat," as handled by Professor Haughton. This is the more readily done, because it offers another opportunity of opposing medical hypotheses, and of endeavouring to eradicate them from medical literature.

The subject is introduced thus :—

"Hippocrates was well aware of the connection between food and animal heat, although he erroneously regarded the animal heat as the innate property of the body that caused an appetite for food, instead of being itself produced by food : if we transpose his cause and effect, *mutatis mutandis*, all his maxims as to animal heat are true. Thus he says—

"'Growing animals possess most innate heat, hence they require most food ; ... ... but the old have least heat, and therefore cquire the least fuel.' (Aph. I. 14.)

"The doctrine of 'innate' heat taught by Hippocrates and Galen, ruled in medicine for 1500 years after Galen's death, until it received its death-blow from the genius of Lavoisier, who demonstrated, in his celebrated memoir read before the French Academy of Sciences in 1783, that the source of animal heat is to be found in the combustion of the carbon of the body by the oxygen of the air received into the lungs by respiration."

Lavoisier's memoir was founded upon experiments with a guinea-pig ; and the hypothesis put forth by him, in opposition to that of Hippocrates, now rules in medicine.

Let me first speak, and speak reverently, of the Father of Medicine.

The first section of his matchless book contains twenty-five Aphorisms. The majority of these are as true, and as important, now as when they were written. They begin with that most suggestive and solemn one :—

Life is short, and the Art long ; opportunity fleeting ; experience deceitful ; and judgment difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals, co-operate."

Then follow excellent declarations of simple facts concerning diet, regimen, and the use of aperients. And it seems to me that the only blot in the first section of the Aphorisms of Hippocrates, is the introduction in three of them of hypotheses. Two of these refer to innate heat, the other to the concoction of humours.

The 13th is as follows :—

"Persons of advanced years endure a spare diet most easily ; next adults ; young persons not nearly so well ; and especially infants, and of them such as are of a lively spirit."

Then follows the 14th, quoted by Prof. Haughton :—

"Growing persons have the most innate heat, they therefore require the most food, for otherwise their bodies are wasted. In old persons the heat is feeble, and therefore they require little fuel, as it were, to the flame, for it would be extinguished by much."

To have expressed this truth consistently with the tenor of the other Aphorisms, it should have been worded thus :—

"Growing persons require the most food. Old persons require less."

And I venture to think that the opposite hypothesis, founded upon Lavoisier's celebrated guinea-pig, and which forms the basis of Prof. Haughton's elaborate calculations, may be dispensed with in like manner, to the great advantage of practical medicine. It will receive its "deathblow," and be superseded by some others ; indeed, it is already giving way to the "mode of motion" hypothesis ; a motion, I presume to say, not one whit more worthy of adoption than any of its predecessors.

Let physicians learn and remember *facts.* They have not time to spend over the pros and cons of contending hypotheses. "Life is short, and the Art long."

Aristotle seems to have thought that the mind is composed of two parts ; one by which we contemplate those things which cannot be otherwise than they are, and one by which we consider those things which can be otherwise than they are.* It is not necessary to cut the mind in two in this manner; nor is it necessary to seek a foundation for mathematics different from that of other branches of natural knowledge. One, two, three, four, a point, a straight line, an angle, a circle, are as much objects of our senses as a tree or an animal. The only difference is in the simplicity of the elements of the former, and the number and complexity of those of the latter. This difference, however, is so great, that what is possible to us in the one case, is impossible in the other. The simple cases may be handled mathematically, the complex ones cannot be so handled.

It might have been expected that these considerations would have been sufficient to prevent any one from engaging in the hopeless undertaking of applying mathematical reasoning, or even mechanical principles, (except to the limited extent noticed), to such complicated problems as occur in physiology, pathology, and therapeutics. But nothing can restrain the ingenuity of men when they are pursuing an object by a false route.

6. *Drugs have been studied botanically.*

The Greeks marred their therapeutics by introducing the philosophy of their times into medicine, and this in two ways ; first, the philosophies themselves being erroneous, their introduction into medicine was the introduction of errors; and secondly, the attempt to apply philosophical speculations to therapeutics was a misapplication even of any truth they might contain.

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* *Ethics*, Book VI.

The early physicians were not content with this double damage. They invented medical philosophies themselves, such as those of the temperaments, and of the humours, and in this third way disfigured and depreciated their really useful medical knowledge.

But they had neither the chemistry nor the mechanics, nor the botany which we have, and therefore, happily for themselves, could not make a further misapplication of science by missapplying these branches of it to medicine. This was left to the moderns, and it has been thoroughly done by them.

We have seen to what extent by the chemists and by the mathematicians. The botanists have followed in train, though they have not been able to effect nearly so much mischief.

Scientific botany, like scientific chemistry, is indebted to physicians for its beginning. One of its earliest friends was Leonhart Fuchs, a physician of Tubingen, about three centuries ago. For a long time it was studied as a branch of natural history only; that is, its descriptions were confined to the outward forms of plants; now it embraces the internal structure of the organs, or constituent parts, which is called organography, and the functions of these organs, or their physiology. At first the descriptions of plants was connected with their supposed medical virtues, but now, like chemistry, it is an independent science, and the chemist and the botanist are no longer physicians.

It is, however, one of the collateral sciences with which the physician ought to be acquainted. The knowledge it can impart adds very much to the interest of the study of the Materia Medica, and it is occasionally useful; but it cannot fulfil such promises as those made by Professor Lindley when he says:—

"This science it is which teaches the physician how to discover in every region the medicines that are best adapted for the maladies prevalent in it, and which, by furnishing him with a certain clue to the knowledge of the tribes in which particular properties are or are not to be found, renders him as much at ease, alone and seemingly without resources, in a land of unknown herbs, as if he were in the midst of a magazine of drugs in some civilised country."

We shall see that these flattering promises cannot be realised.

There are two ways in which they might be fulfilled: first, in the plants themselves there might be evidence or information from which the physician might learn the medicines best adapted for special maladies. Or, secondly, the classification or arrangement of plants in the various systems of botany might furnish this evidence.

Let us ask, then, is there anything in plants themselves which indicates their medicinal properties? Not in themselves. The most careful examination, whether of their form, appearance, colour, taste, or smell, or of the different parts of them, or of the climates or regions in which they grow, or of the seasons in which they bloom, only forces upon the mind the conclusion that the medical virtues of plants cannot, in this way, be learned at all.

No; but, says Professor Lindley, it is the *science* of botany which teaches the physician this knowledge. Let us look at the science.

The view must be a brief one, but it is hoped that it may be clear and correct. The representative men of the modern systems of botany are Cæsalpinus, Ray, Tournefort, Linnæus, the two Jussieus, De Candolle.

Andreas Cæsalpinus of Arezzo, about 1580, was the first who accomplished a scientific classification of plants. He was a *fructicist.* He says:—

"If we take the root, or stem, or leaves, or blossom, as our guide in classification, we shall separate plants obviously alike, and approximate those which have merely superficial resemblances."

His system, therefore, is founded upon the difference in the number or covering of the *seeds.* He has ten classes formed in this way:—

"Some have, under one flower, one seed, as *amygdala*; or one seed receptacle, as *rosa*; or two seeds, as *ferularia*; or two seed receptacles, as *nasturtium*; or three seeds, as the *tithymalum*; or three receptacles, as the *bulbaceæ*; or four seeds, as *marrubium*; or four receptacles, as *siler*; or more seeds, as *cicoraceæ*; or more receptacles, as *pinus.*"

A strong testimony in favour of this arrangement is that it is consistent with natural orders, with many of which Cœsalpinus was acquainted.

John Ray, a century later—about 1680—the father of English scientific botany, based his system in part upon the *fruit*, and in part upon the *flower.* The vegetable kingdom being necessarily first divided into plants which have flowers and plants which have not flowers—*phanerogams* and *cryptogams*—the flowering plants are *simple* or *composite.* The simple flowers have the seeds *naked*, or in a *pericarp.* Those with naked seeds are arranged according to the number of the seeds. Of those which are surrounded by a pericarp, or fruit, some have the first large and soft, as apples; some have it small and juicy, as gooseberries. If this fruit is not juicy but *dry*, it is simple or multiple. The simple are the pea-tribe, *leguminosæ;* the multiple are arranged according to the differences in the flowers, *monopetalous*, &c.

The *composite* flowers are those which have many florets in the same *calyx.* They are divided into those having complete florets, and those having only half florets.

This system was in use through the 18th century. Like its predecessor it had the advantage of embracing some natural families.

Joseph Pitton de Tournefort, of Paris, published his "Institutio rei Herbariæ" in 1700. He was a *corollist.* His system is based upon the different forms of the *corolla.* Thus not only departing from the seed altogether, but not even including the whole flower. Tournefort's first division is into herbs and trees; herbs are divided into seventeen classes, according to the presence or absence of the corolla, and its form, regular or irregular, single or numerous petals. His second division of trees is divided in the same manner into five classes.

Even this arrangement, feeble as it would seem to be, includes some natural families also, as the *labiats*, *cruci-forms*, *umbellifers*, *legumens*, &c.

Karl Linné, one of Sweden's greatest ornaments, had become celebrated half a century later—about 1750. Linnæus chose also only *a part of the flower* as the foundation of his system—not the corolla but the *stamens* and *pistils*, the former for the classes, the second for the orders. He was a *stamenist.* In this manner he arranges the phanerogams or flowering plants in twenty-three classes, and the cryptogams, or flowerless plants in one class.

Linnæus thus returned to *numbers*, retracing steps in the path opened by Cæsalpinus, but quitted by Tournefort for one much less precise and fixed —that of *forms.* There was also in the system of Linnæus a tinge of physiology, which was a new feature. It grievously separates the members of some natural families.

This defect, by which plants manifestly closely related in nature were artificially detached from one another, became more and more felt, and in about another quarter of a century the two Jussieus, uncle and nephew, were able to gain attention to a method which is justly called the natural method.

It is not founded upon the consideration of a single organ, but the characters presented by every part of a plant concur in fixing its position in the scheme.

And, further, anatomy and physiology are introduced. There are fifteen classes, which include 161 natural orders. These are arranged in three divisions. *Acotyledons*, which correspond to the cryptogams, mushrooms, lichens, lycopods, &c., eleven orders; *monocotyledons*, embracing thirty orders; and *dicotyledons* 123 orders. These three divisions are taken from the seed as germinating. Cæsalpinus took the seed as perfected; Jussieu takes it as beginning to grow. It has then either one lobe from which one little leaf springs—monocotyledons—or two lobes from which two little leaves spring—dicotyledons.

This natural method was a great improvement upon the artificial system of Tournefort and Linnæus.

De Candolle—from 1824 to 1840—adopts the same method, but carries it further, availing himself of the discovery which in the meantime had been made by Des Fontaines of the distinct structure and growth of the *stem;* one portion of flowering plants increasing from *within*, the other from *without*, or on the external surface. De Candolle adopts this as the basis of his arrangement, and calls those growing from within *endogens*, and those growing from without *exogens*. The first correspond to Jussieu's *monocotyledons*, the second to the *dicotyledons*. The cryptogams or acotyledons are called *acrogens*.

This method is the one which prevails in our time. It is not founded, as the earlier systems were, upon external characters only, but very much from the anatomy and physiology of plants. It is, so far, more likely to be permanent, but it is not without its difficulties, nor is it free from vagueness; for it brings many plants together which have no very obvious resemblances. This will be acknowledged to be no unimportant matter when it is remembered that the great object of science in classificaton is to bring together things which are alike, and to separate things which differ.

The latest improvement is that made by Professor Lindley, who has introduced into English botany the use of English names.

Of these six methods of classifying the vegetable kingdom the four first belong to natural history, the similars and dissimilars being exclusively external. They are asked to tell us anything they know about medical virtues. They answer plainy, "it is not in us."

The two remaining methods advance into the interior of plants, and examine the structure and the functions of each part. This is a great increase of knowledge. Let us ask them the same question; what can you tell us of medical virtues? They reply as distinctly as the former, "it is not in us."

How is it, then, that many medical writers, Pereira among them, have adopted a botanical arrangement of the *Materia Medica?* thus apparently confirming the opinion of Professor Lindley that botany "teaches the physician how to discover medicines," and implying that the "natural orders" of plants contain some rule as to their medical virtues.

The examples of any rule of this kind are, at least, equally matched by the exceptions, both in number and importance; hence the rule is useless, and falls to pieces. Plants gathered together as they are at present, in natural orders, differ both as regards food and medicine, some in the same order being nutritious, and others poisonous—as carrots and hemlock—and among those which are poisonous, and therefore medicinal, there are very great differences of drug-action.

And as regards the example of Pereira he acknowledges that he has adopted this method in despair, "on account of the great difficulties attending any other method, especially that founded on the physiological effects of medicines," the only true method.

There are two ways of looking at this question. Either to suppose that the botanical arrangements yet made are not perfect, or the best that can be made; and that some botanist, perhaps yet unborn, may make an arrangement of plants which will put those which are nutritious and those which are poisonous in more consistent groups; or to believe that the arrangements of the physician have nothing to do with those of the botanist. This latter view seems to me to be the true one.

It would be obviously unreasonable to ask a botanist to arrange his plants according to their action, nutritive or poisonous, upon animals which it does not come within his province to observe. To me it appears equally unreasonable for the physician to adopt the method of the botanist, and arrange his drugs according to those characters only which are open to the botanist to observe.

It may be safely concluded that there is no observed connection between either the external forms of plants or the internal structure of the organs or their functions, and their action as drugs. Neither the outward appearance, nor the structure of any part, nor its function, nor the mechanical power, nor the chemical composition of vegetables, throws any light upon their therapeutic action.

I shall be charged with being an enemy to science. I contend that whoever points out the true limits of its several branches is one of its best friends. What, then, are the uses of botany to the medical man? Several; at present I will mention only one. That the English practitioner may be taught how he may substitute English species of medicinal plants for foreign ones. For instance:- -

There are three principal species of *daphne*. The *D. gnidium* (flax-leaved daphne) of Hippocrates. The *D. mezerium* (spurge olive) of Dioscorides, and the *D. laureola* (spurge laurel) of Gerard and Parkinson. The first and second are natives of Greece, and, I believe, are still to be found in the Greek Pharmacopœia. The second is indigenous in Germany, and was proved by Hahnemann; and it was probably brought into this country, along with other medicinal plants, by the Romans. The third is indigenous in England. This last I have used instead of the mezerion, with good success, especially in some skin diseases. In the same manner the *bryonia* of England is the *B. dioica*, that of Germany is the *B. alba*, the latter being the species proved by Hahnemann. For many years I have used the English species instead of the German, and with great satisfaction. The same result may, perhaps, be expected if the *actæa spicata* (herb Christopher), an English species, be substituted for the *actæa racemosa* (or *Cimicifuga racemosa*, black cohosh) of America. It grows on high chalky ground in Yorkshire, and it deserves to be carefully proved. The same remarks will apply to many other foreign plants with equal force, and the attention of the younger members of the profession is earnestly invited to the investigation.

Before quitting the subject of botany let me ask leave to point out a comparison which may be made between the progress of the classfication of plant and the progress of homœopathy.

Hahnemann's homœopathy is very exactly comparable with Tournefort's botany. This system of Tournefort as we have seen, was founded upon the similar and the dissimilar in the form of the *corolla*. It put together the similar forms and separated the dissimilar. Hahnemann did the same with the symptoms of diseases and the symptoms of drugs; similarity put them together, disimilarity separated them.

Linnæus added some physiology to this external system of botany, but it still remained in his hands what it had been in Tournefort's hands, a comparison of similars.

So modern homœopathists, feeling with Dr. Black how bare and unsatisfactory a medical system is without pathology, have tinged Hahnemann's external homœopathy with pathology, by adding the internal condition as so many additional symptoms to the external ones. They then carry out as before the doctrine of similars, and "still hold to the old empirical formula of Hahnemann drawn from the totality of the symptoms."*

Jussieu and De Candolle took a great step in advance when they made *anatomy* the basis of their method. It was nothing less than the substitution of a natural for an artificial system.

Though not suggested by this progress in botanical science, the thought I have breathed resembles that of Jussieu's. Make *anatomy* the basis of therapeutics; endeavour to discover the organs which are the seat of disease, and the organs which are acted on by drugs, and prescribe a drug which acts upon the organ where the disease is seated.† In this manner similarity is exchanged for identity. The difference between the two methods is the difference which exists between *similis* and *idem*—between similar symptoms and the same organ.

The next step—the *kind* of action and the connection between the kind of action of disease and of drug—shall receive all the attention it claims in a future Essay.

Linnæus, by the tinge of physiology in his system, added a charm, but gave no real help; so the pathology of Dr. Black is comforting to the educated medical mind. But so long as its conditions are viewed as so many symptoms to be added to the outer ones, and similarity is to be aimed at in the selection of remedy, the benefit is more imaginary than real. On the method proposed it is substantial and fundamental. Similarity of symptoms exhibits some mysterious relationship between disease and its remedies; but an anatomical connection brings them into actual contact. It is the substitution of a natural for an artificial system.

7. *Drugs have been studied pathologically.*

Drugs studied pathologically means that they have been prescribed in accordance with some pathological doctrine.

The methods pursued for the discovery of the action of drugs which we have hitherto noticed have been either entirely mistaken and vain, as the three first, or have rendered very partial service, as the three last.

We now come to a method which ought to have proved a good one; and, in proportion as a true pathology is established, it may become a good one. So far it has been a mistaken one, and, as carried into practice, has done more harm than good; because the pathological doctrines succesively in vogue, and especially those among the ancients, have been erroneous.

There is one grand therapeutic axiom which has ruled in medicine for thousands of years, and has been supported by a succession of pathological doctrines, which claims to be considered in every medical investigation.

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* Dr. Black, in *Monthly Homœopathic Review*, Oct., 1868, and my "Reply," Nov. 1868. Also as a "Postscript" to the Essay on "The Anatomical Basis of Therapeutics," 1868. Dr. Black endeavours to take advantage of the expression "tubercular cachexia." This expression, like many similar ones, serves only to hide our ignorance from ourselves. It may be used, for brevity's sake, as summing up the local diseases and the symptoms of such cases; but if any one thinks that it contains knowledge beyond this, he deceives himself.

† When there are several acting on the same organ, the *kind* of action will decide which. The kind of action of drugs will take its turn for a consideration in the next Essay.

This is the treatment of diseases by their contraries—*contraria contrariis curantur.* It will repay the trouble if we look, for a short time, at these successive doctrines.

The first was old in the days of Hippocrates, and notwithstanding that it was vigorously opposed in one of the Hippocratic writings, continued to hold its supreme authority till two centuries ago, and this mainly because it was founded upon, and was supported by, the prevailing philosophy of the times.

The doctrine of the ancient philosophers, which prevailed amid many conflicts, was substantially this :—There is a primary matter which has neither form nor quality. This first becomes apparent to us by being made to assume in the hands of the Great Creator the form and qualities of *four elements* –fire, air, earth, and water. From these all other forms and qualities are elaborated.

To suit this doctrine of the philosophers the medical doctrine was invented of *four temperaments*—hot, cold, dry, and moist –health being a combination in due proportion of these, and sickness being a preponderance of one or more of them, and so constituting an *intemperament.*

Hence followed the therapeutic doctrine that drugs are possessed of similar qualities; and the arrangement of the Materia Medica in eight divisions --hot, cold, dry, and moist; and their combinations hot and dry, hot and moist, and cold and dry, and cold and moist.

All the details of diseases and of remedies being thus arranged to the entire satisfaction of every one, it is easy to see how charming the treatment by contraries must be. As a matter of course a hot intemperament must be treated by a cold remedy, and a cold intemperament by a hot one.

I have remarked that this doctrine was ancient in the time of Hippocrates, that this, four centuries before Christ; it was brought to perfection, and established upon the ruins of every other medical doctrine, by Galen, in the second century after Christ; and it reigned without a rival for fifteen centuries more. It would be disrespectful, therefore, to the men of so many generations did we not acquaint ourselves to some extent with this wonderful hypothesis—wonderful indeed it must have been to bind down the medical profession as one man, to receive it without question as the only orthodox method, for so long a time.

In addition to what has been already said of the four elements, a few details relative to the four temperaments, the intemperaments, and the classification of drugs, will give us an intelligent understanding of this mighty system of medicine.

The temperaments are four simple and four compound ones, as already enumerated.

These temperaments are either of the whole body, or of some part of it, *e. g.*, the brain, the heart, the liver, &c.

A bone is the most dry and cold.
A cartilage less so.
A ligament less than a cartilage.
The heart is most hot.
The liver next to the heart.
Muscles are moist, and hot.
The skin is less so.
The spinal marrow is colder and moister than the skin.
The brain exceeds this in moisture.

There are, in the same manner, eight kinds of intemperaments. When it is said a man has a hot liver, it is meant that his liver is hotter than a justly tempered one should be.

Then there are four humours—the blood, the phlegm, the yellow bile, and the black bile. And from these, according to the predominance of any one of them, we have a sanguine person, a phlegmatic person, a choleric person, or a melancholic person.

A disease is defined to be an affection against nature, by itself hurting and depraving *the action of the part in which it resides.* It is sometimes called a distemper.

By symptoms are meant that change which the disease brings, and which follows a disease *as a shadow follows the body.*

A medicine is defined to be that which has power to change the body according to one or more qualities, but which cannot be changed into our nature—*cannot nourish.*

They are possessed of the four simple qualities—heat, cold, &c., and the four compound ones—heat and moisture, &c.

Medicines are hot, cold, &c., in four degrees, *e. g.*, warm water is temperate; that which is a little hotter is the first degree of heat; if manifestly hot, it is the second degree; if it heat more vehemently it has come to the third; if it scald, it has arrived at the fourth degree of heat. The following are a few examples:—

Simple Medicines hot in the
First degree—Absinthium. Althæa. Amygdala dulc. Beta.
Second degree Ammoniacum. Artemisia. Anethum. Salvia.
Third degree—Abrotanum. Agnus castus. Anisum. Sabina.
Fourth degree—Allium cepa. Euphorbium. Sinapis. Ruta.

Simples cold in the.
First degree—Atriplex. Hordeum. Malva. Pyra. Pruna. Rosa.
Second degree—Acacia. Cucumis. Plantago. Solanum hortense.
Third degree—Hyoscyamus. Solanum somniferum. Mandragora.
Fourth degree—Cicuta. Papaver. Opium.

Simples moist in the
First degree—Buglossum. Viola. Rapum. Spinacia.
Second degree—Lactuca. Cucurbita. Melones. Portulacca.

Simples dry in the
First degree—Thus. Chamœmelon. Brassica. Crocus. Faba.
Second degree—Pix arida. Nux moschata. Mastiche. Myrrha.
Third degree—Abrotanum ustum. Myrtus. Galla. Sabina.
Fourth degree—Piper. Allium. Nasturtium. Euphorbium.

This arrangement of the qualities, Galen says, is in order to proportion them to diseases. For example: To a disease hot in the second degree no other medicine must be used than that which is cold in the like degree.

So much for the first qualities or faculties of medicines; now for the second. Those are termed second faculties which are dependant upon the first. It is the part of heat to rarify, attract, open. Of cold to condense, repercuss, shut up. Of moisture to soften, relax. Of dryness, to harden, stiffen.

Hence, that is termed an attractive medicine which has an attractive faculty; as, on the contrary, that a repercussive which repels. So of emollients, relaxers, &c.

The third faculty of medicines depends upon the first and second, sometimes conjoined, at other times separate. Its operations are to agglutinate; to fill with flesh; to cicatrize; to assuage pain; to promote or diminish the secretions of the kidneys, skin, uterus, &c. Thus the generation of flesh is produced by the concourse of dryness and cleansing. Coldness joined with some moisture procures rest; this is the sleepy faculty of opium.

But the fourth faculty of medicines does not depend upon any of the foregoing qualities, or upon any other manifest quality. This depends upon *an occult property* of the whole substance, by means of which it works rather upon this than that part ; upon this rather than that humour. Wherefore physicians *cannot find out this faculty by reason, but only by experience.* Hence it is that names have been given to medicines from those parts that they chiefly respect. For they are termed *cephalics* which respect the head, as betony, marjoram, sage, rosemary ; *pneumonics* which respect the lungs, as liquorice, sweet almonds, elecampane ; *cordials* that strengthen the heart, as saffron, cinnamon, citrons (chiefly the rinds), bugloss, coral, ivory ; *stomachics,* which respect the stomach, as nutmegs, mint, anise, mastic, pepper, ginger ; *hepatics,* which respect the liver, as wormwood, agrimony, succory, sanders ; *splenetics,* which have relation to the spleen, as thyme, broom flowers, capers (the bark of their roots), the bark of tamarisk ; *diuretics,* such as respect the kidneys and urinary passages, as the roots of smallage, asparagus, fennel, butcher's broom, turpentine, plantain, saxifrage ; *arthritics,* such as strengthen the joints, as cowslips, elecampane, calamint, hermodactils, &c. and to this rank is referred purging medicines, which, furnished with a "*specific property,*" show their efficacy on one humor more than on another, and that impact more in one part than in another. For thus *agaric* draws phlegm from the head and joints ; *rhubarb* draws choler from the liver, and hurts the kidneys.

Such is a sketch of the most famous of all medical systems. It has often been remarked that no hypothesis becomes popular unless it has some truth mixed up with its fancies ; and it is not difficult to see that this system, though it begins very high up in the clouds of imagination, descends at length to very practical matters of common observation. That, in fact, it is constrained to acknowledge itself compelled to abandon its boasted reasonings, and to take up with the previously despised testimony of experience derived from the observation of the senses.

It is a melancholy fact that even Hippocrates himself could not prevail to put away the vain fancies of this system, and persuade men to be content with the truth of facts. The treatise "On Ancient Medicine," which is acknowledged by competent judges to be a genuine work of Hippocrates, commences thus :—

"Whoever having undertaken to speak or write on medicine, have first laid down for themselves some hypothesis to their argument, such as hot, or cold, or moist, or dry, or whatever else they choose, are all clearly mistaken in much that they say ; and this is the more reprehensible as relating to an art which all men avail themselves of on the most important occasions, and the good operators and practitioners in which they hold in especial honour." He goes on to refute these speculations, and remarks with wonderful sense and precision, "*I have not thought that medicine stands in need of an empty hypothesis.*"*

This is the system of treatment by contraries of the *dogmatists,* ancient and modern. Another system having the same maxim, "*contraria contrariis curantur,*" was maintained with much talent among the ancients under the title of *Methodism.* This system, after a vigorous struggle, was overpowered by dogmatism, and in consequence its books are nearly all lost.

Asclepiades of Bythinia, a disciple of Epicurus, gave to the elements the name of atoms, and taught that the human body is formed of tissues every way permeable, or pierced with invisible holes which he named pores, through which atoms continually pass and repass. Health depends upon the symmetry of the pores and the atoms. Disease on their disproportion. The aim of medicine is to enlarge the pores when they are too contracted, and to close them when they are too open—"*contraria contrariis curantur.*" His remedies made him a popular practitioner; they were chiefly physical exercise, such as walking, riding on horseback or in a carriage, and boat rowing; frictions; and wine.

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* *The Genuine Works of Hippocrates,* by F. Adams, LL.D. Sydenham society's Edition, Vol. I., page 161.

Themison of Laodicea, a disciple of Asclepiades, but not quite so visionary, separated diseases into three orders, the constrictive or contracted; the flexionary or relaxed; and the mixed.

It follows from this division of diseases that with the Methodists there were only two kinds of therapeutic indications to fulfil, viz., to relax when there was constriction, and to constrict when there was a flux or relaxation. All remedies therefore are either astringents or relaxants. Among the former are darkness, fresh air, cold or acid drinks, decoction of quince, red-wine vinegar and solution of alum. Among the relaxants are bleeding, emollient poultices, warm and laxative drinks, sudorifics, warm air, sleep, and exercise carried to fatigue.

The works of Cœlius Aurelianus are the only writings which have not been lost, of the physicians belonging to this school. But many extracts have been preserved by other authors.*

A modern edition of Methodism was made popular for a time by Dr. John Brown, a pupil of Cullen's. "Life," he said, "is only sustained by incitation. It is only the result of the action of incitants on the incitability of organs." Consequently *sthenia and asthenia* were the only divisions necessary; "*contraria contrariis curantur*" being the rule of treatment, and nearly all diseases being *asthenic*, wine became with Brown almost the only remedy. As a serious commentary on this method of treatment, I cannot avoid quoting the following passage from the French *History of Medicine* of Renouard:—

"This doctrine, so seductive in its exposition, so easy in its application, is one of the most disastrous that man has been able to imagine, for it tends to propagate the abuse of diffusible stimulants, of which spirituous liquors make a part, an abuse excessively injurious to health in general, and the intellectual faculties in particular—an abuse to which man is too much inclined naturally, and which the sophisms of Brown may have contributed to spread in all classes of English society."

There is yet another form of the doctrine of contraries. This was held by Hippocrates himself, and it is very prevalent among modern physicians. It is a comparatively limited and feeble doctrine, but, so far as it goes, it is very firmly maintained. Its principal expression is in giving purgatives in constipation, astringents in diarrhœa, refrigerants in fever, and stimulants in debility.

The more ancient and prevalent doctrine was perfect; all diseases were hot, cold, dry or moist, or a combination, of these; all remedies were possessed of exactly similar qualties; so that it was always possible, by the hypothesis, to prescribe a contrary. The defect of the doctrine was that it was imaginary—the whole story was a fiction. But a fiction of such beauty and attractiveness, that mankind were fascinated by it for thousands of years.

The Hippocratic and modern doctrine is lame in comparison. Many diseases, as viewed at present, have no contrary condition, by inducing which, they can be opposed. Many drugs have no recognised condition at all according to which they can have contrary actions; for example, all those that are called *alteratives*. It is a fragmentary doctrine, embracing only a small number of particulars. No doubt, there is some truth and reason in it, but it has been carried out to an extent which has buried this truth under mountains of error.

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* See the *History of Medicine*, by Dr. Renouard.

Hahnemann's doctrine of "*similia similibus curantur*" is opposed to this modern doctrine of contraries, and not to that of Galen.

There is yet another pathological and therapeutical doctrine of contraries, of great importance and of wide-spread influence in the practice of physic, which claims to be noticed as one of the methods by which the action of drugs has been studied. It is the doctrine of derivation, revulsion, or counter-irritation. Its contrariety to the disease lies in the action being produced in a healthy part. This has been brought before us on former occasions, and it is not necessary to go into its details now. It may be remarked, however, that its greatest justification, as it appears to me, is contained in one of the Aphorisms of Hippocrates, which says :—

" Of two pains occurring together, not in the same part of the body, the stronger weakens the other." (Section II. 46.)

The arguments against it are, that it makes two sores instead of one, and that it is practically possible to cure by acting upon the diseased parts, and leaving the healthy parts to remain healthy.

The method which is opposed to it has been called organopathy, and is that which is advocated in these Essays.—*The Monthly Homœopathic Review,* Feb. & March 1873.

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